

SEQUENCE LISTING

<110> Cao, Liangxian
Trifillis, Panayiota

<120> METHODS FOR IDENTIFYING COMPOUNDS THAT MODULATE UNTRANSLATED
REGION-DEPENDENT GENE EXPRESSION AND METHODS OF USING SAME

<130> 10589-012-999

<140>
<141> 2004-01-21 (371c date)

<150> PCT/US2004/001643
<151> 2004-01-21

<150> 60/441,637
<151> 2003-01-21

<160> 94

<170> PatentIn version 3.2

<210> 1
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: one motif of G-quartet element

<220>
<221> misc_feature
<222> 3, 7, 8, 11
<223> n = a, t, c, or g

<220>
<221> misc_feature
<222> (7)..(8)
<223> This represents one form of the sequence as described, other forms
described may have up to five nucleotides in this variable region

<400> 1
ggntggnnng ntgg 14

<210> 2
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: one motif of G-quartet element

<220>
 <221> misc_feature
 <222> 3, 4, 7, 8, 11, 12
 <223> n = a, t, g or c

<220>
 <221> misc_feature
 <222> (2)..(12)
 <223> This represents one form of the sequence as described, other forms
 described have longer variable regions, typical is 2 - 10
 nucleotides

<400> 2
 ggnnggnngg nngg 14

<210> 3
 <211> 14
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: general formula of G-quartet
 element

<220>
 <221> misc_feature
 <222> 3, 4, 7, 8, 11, 12
 <223> n = a, t, g, or c

<220>
 <221> misc_feature
 <222> (2)..(12)
 <223> This represents one form of the sequence as described, other forms
 described have longer variable regions, typical is 2 - 10
 nucleotides

<400> 3
 ggnnggnngg nngg 14

<210> 4
 <211> 19
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: one subunit of 15-LOX-DICE

<400> 4
 ccccrcccuc uuccccaag 19

<210> 5
 <211> 152
 <212> DNA
 <213> Homo sapiens

<400> 5

gcagaggacc agctaagagg gagagaagca actacagacc cccctgaaa acaaccctca 60
gacgccacat cccctgacaa gctgccaggc aggttctctt cctctcacat actgaccac 120
ggctccaccc tctctccct ggaaaggaca cc 152

<210> 6
<211> 792
<212> DNA
<213> Homo sapiens

<400> 6
tgaggaggac gaacatccaa ctttccaaa cgctccct gccccaatcc ctttattacc 60
ccctccttca gacaccctca acctcttctg gctcaaaaag agaattggg gcttagggc 120
ggaaccaag cttagaactt taagcaaaa gaccaccact tcgaaacctg ggattcagga 180
atgtgtggcc tgcacagtga attgctggca accactaaga attcaaactg ggcctccag 240
aactcactgg ggctacagc tttgatccct gacatctgga atctggagac cagggagcct 300
ttggttctgg ccagaatgct gcaggacttg agaagacctc acctagaaat tgacacaagt 360
ggaccttagg ccttctctc tccagatgtt tccagacttc cttgagacac ggagcccagc 420
cctcccatg gagccagctc cctctattta tgtttgcaact tgtgattatt tattatttat 480
ttattattta tttatttaca gatgaatgta tttatttggg agaccgggg atcctggggg 540
accaatgta ggagctgcct tggctcagac atgttttccg tgaaaacgga gctgaacaat 600
aggctgttcc catgtagccc cctggcctct gtgccttctt ttgattatgt tttttaaaat 660
atztatctga ttaagttgtc taaacaatgc tgatttggtg accaactgtc actcattgct 720
gagcctctgc tcccagggg agttgtgtct gtaatcgccc tactattcag tggcgagaaa 780
taaagtttgc tt 792

<210> 7
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Group I AU-Rich element (ARE)
cluster of 3'untranslated region

<400> 7
auuuuuuuau uuauuuuuu a 21

<210> 8
<211> 40
<212> DNA
<213> Homo sapiens

<400> 8

kctggaggat gtggctgcag agcctgctgc tcttgggcac 40

<210> 9
 <211> 289
 <212> DNA
 <213> Homo sapiens

<400> 9
 gccgggggagc tgctctctca tgaacaaga gctagaaact caggatggtc atcttggagg 60
 gaccaagggg tgggccacag ccatgggtggg agtggcctgg acctgccctg ggccacactg 120
 accctgatac aggcatggca gaagaatggg aatattttat actgacagaa atcagtaata 180
 tttatatatt tatattttta aaatatattt ttattttatt atttaagttc atattccata 240
 tttattcaag atgttttacc gtaataatta ttattaaaaa tatgcttct 289

<210> 10
 <211> 21
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Group I AU-Rich element (ARE)
 cluster of 3'untranslated region

<400> 10
 auuuuuuuau uuauuuuuu a 21

<210> 11
 <211> 47
 <212> DNA
 <213> Homo sapiens

<400> 11
 atcactctct ttaatcacta ctcacattaa cctcaactcc tgccaca 47

<210> 12
 <211> 307
 <212> DNA
 <213> Homo sapiens

<400> 12
 taattaagtg cttcccactt aaaacatatc aggccttcta tttatttatt taaatattta 60
 aattttatat ttattgttga atgtatgggt gctacctatt gtaactatta ttcttaatct 120
 taaaactata aatatggatc ttttatgatt ctttttgtaa gccctagggg ctctaaaatg 180
 gtttacctta tttatcccaa aaatatattt tattatgttg aatgttaa atagtatcta 240
 tgtagattgg ttagtaaaac tatttaataa atttgataaa tataaaaaaa aaaaacaaaa 300
 aaaaaaa 307

<210> 13
 <211> 15
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Group III AU-Rich element (ARE)
 cluster of 3'untranslated region

 <220>
 <221> misc_feature
 <222> (1)..(15)
 <223> n = a, t, g or c

 <400> 13
 nauuuauuuu uuan 15

 <210> 14
 <211> 62
 <212> DNA
 <213> Homo sapiens

 <400> 14
 ttctgcccctc gagcccaccg ggaacgaaag agaagctcta tctcgccctcc aggagcccag 60
 ct 62

 <210> 15
 <211> 427
 <212> DNA
 <213> Homo sapiens

 <400> 15
 tagcatgggc acctcagatt gttgttggtta atgggcattc cttcttctgg tcagaaacct 60
 gtccactggg cacagaactt atgttggttct ctatggagaa ctaaaagtat gagcgttagg 120
 aactatTTTT aattatTTTT aatttattaa tatttaaata tgtgaagctg agttaattta 180
 tgtaagtcatt atttatattt ttaagaagta ccacttgaaa catttttatgt attagttttg 240
 aaataataat ggaaagtggc tatgcagttt gaatatcctt tgtttcagag ccagatcatt 300
 tcttggaag tgtaggctta cctcaaataa atggctaact tatacatatt tttaaagaaa 360
 tatttatatt gtatttatat aatgtataaa tggtttttat accaataaat ggcattttta 420
 aaaattc 427

 <210> 16
 <211> 15
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Group III AU-Rich element (ARE)

cluster of 3'untranslated region

<220>
 <221> misc_feature
 <222> (1)..(15)
 <223> n = a, t, g or c

<400> 16
 nauuuauuuu uuuuau 15

<210> 17
 <211> 701
 <212> DNA
 <213> Homo sapiens

<400> 17
 aagagctcca gagagaagtc gaggaagaga gagacggggt cagagagagc gcgcggggcgt 60
 gcgagcagcg aaagcgacag gggcaaagtg agtgacctgc ttttgggggt gaccgccgga 120
 gcgcggcggtg agccctcccc cttgggatcc cgcagctgac cagtcgcgct gacggacaga 180
 cagacagaca ccgccccag cccagttac cacctcctcc ccggccggcg gcggacagtg 240
 gacgcggcgg cgagccgcgg gcagggggccg gagcccggcc ccggaggcgg ggtggagggg 300
 gtcggagctc gcggcgctgc actgaaactt ttcgtccaac ttctgggctg ttctcgcttc 360
 ggaggagccg tgggtccgcgc gggggaagcc gagccgagcg gagccgcgag aagtgctagc 420
 tcggggccggg aggagccgca gccggaggag ggggaggagg aagaagagaa ggaagaggag 480
 agggggccgc agtggcgact cggcgctcgg aagccgggct catggacggg tgaggcggcg 540
 gtgtgcgag acagtgtcc agcgcgcgcg ctccccagcc ctggcccggc ctcgggccgg 600
 gaggaagagt agctcgccga ggcgccgagg agagcggggc gcccacagc ccgagccgga 660
 gagggacgcg agccgcgcgc cccggtcggg cctccgaaac c 701

<210> 18
 <211> 1892
 <212> DNA
 <213> Homo sapiens

<400> 18
 tgagccgggc aggaggaagg agcctccctc agggtttcgg gaaccagatc tctctccagg 60
 aaagactgat acagaacgat cgatacagaa accacgctgc cgccaccaca ccatcaccat 120
 cgacagaaca gtccttaatc cagaaacctg aaatgaagga agaggagact ctgcgagag 180
 cactttgggt ccggagggcg agactccggc ggaagcattc ccgggcgggt gaccagcac 240
 ggtccctctt ggaattggat tcgccatttt atttttcttg ctgctaaatc accgagcccg 300
 gaagattaga gagttttatt tctgggattc ctgtagacac acccaccac atacatacat 360

ttatatatat	atatattata	tatatataaa	aataaatatc	tctatttttat	atatataaaa	420
tatatatatt	cttttttttaa	attaacagtg	ctaagtgttat	tggtgtcttc	actggatgta	480
tttgactgct	gtggacttga	gttgggaggg	gaatgttccc	actcagatcc	tgacagggaa	540
gaggaggaga	tgagagactc	tgcatgatc	ttttttttgt	cccacttggg	ggggccaggg	600
tcctctcccc	tgcccaagaa	tgtgcaaggc	cagggcatgg	gggcaaatat	gacccagttt	660
tggaacacc	gacaaacca	gccctggcgc	tgagcctctc	taccccaggt	cagacggaca	720
gaaagacaaa	tcacaggttc	cgggatgagg	acaccggctc	tgaccaggag	tttggggagc	780
ttcaggacat	tgtgtgtctt	tggggattcc	ctccacatgc	tgcacgcgca	tctcgcccc	840
aggggcactg	cctggaagat	tcaggagcct	ggggggcctt	cgcttactct	cacctgcttc	900
tgagttgccc	aggaggccac	tggcagatgt	cccggcgaag	agaagagaca	cattgttgga	960
agaagcagcc	catgacagcg	ccccttcctg	ggactcgccc	tcctcctctt	cctgctcccc	1020
ttcctggggg	gcagcctaaa	aggacctatg	tcctcacacc	attgaaacca	ctagttctgt	1080
ccccccagga	aacctgggtg	tgtgtgtgtg	agtgggtgac	cttcctccat	cccctggctc	1140
ttcccttccc	ttcccagggc	acagagagac	agggcaggat	ccacgtgccc	attgtggagg	1200
cagagaaaag	agaaagtgtt	ttatatacgg	tacttattta	atatcccttt	ttaattagaa	1260
attagaacag	ttaatttaaat	taaagagtag	ggtttttttt	cagtattctt	ggttaatatt	1320
taatttcaac	tatttatgag	atgtatcttt	tgctctctct	tgctctctta	tttgtaccgg	1380
tttttgtata	taaaattcat	gtttccaatc	tctctctccc	tgatcgggtg	cagtcactag	1440
cttatcttga	acagatatatt	aattttgcta	acactcagct	ctgccctccc	cgatcccctg	1500
gctccccagc	acacattcct	ttgaaagagg	gtttcaatat	acatctacat	actatatata	1560
tattgggcaa	cttgatattg	tgtgtatata	tatatatata	tgtttatgta	tatatgtgat	1620
cctgaaaaaa	taaacatcgc	tattctgttt	tttatatggt	caaaccaaac	aagaaaaaat	1680
agagaattct	acatactaaa	tctctctcct	tttttaattt	taatatttgt	tatcatttat	1740
ttattggtgc	tactgtttat	ccgtaataat	tgtggggaaa	agatattaac	atcacgtctt	1800
tgtctctagt	gcagtttttc	gagatatccc	gtagtacata	tttattttta	aacaacgaca	1860
aagaaataca	gatatatctt	aaaaaaaaaa	aa			1892

<210> 19

<211> 249

<212> RNA

<213> Homo sapiens

<400> 19

ccgggcucau	ggacggguga	ggcggcggug	ugcgcgagaca	gugcuccagc	gcgcgcgcuc	60
------------	------------	------------	-------------	------------	------------	----

cccagcccug gcccggccuc gggccgggag gaagaguagc ucgccgaggc gccgaggaga 120
 gcgggccgcc ccacagcccg agccggagag ggacgcgagc cgcgcgcccc ggucggggccu 180
 ccgaaaccuau gaacuuucug cugucuuggg ugcauuggag ccuugccuug cugcucuacc 240
 uccaccaug 249

<210> 20
 <211> 15
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Group III AU-Rich element (ARE) cluster of 3'untranslated region

<220>
 <221> misc_feature
 <222> (1)..(15)
 <223> n = a, t, g or c

<400> 20
 nauuuauuuu uuan 15

<210> 21
 <211> 49
 <212> DNA
 <213> Homo sapiens

<400> 21
 ccgccagatt tgaatcgcg gaccggttg cagaggtggc ggcggcggc 49

<210> 22
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 22
 ggccctctggc cggagctgcc tgggtcccaga gtggctgcac cacttccagg gtttattccc 60
 tgggtgccacc agccttcctg tgggcccctt agcaatgtct taggaaagga gatcaacatt 120
 ttcaaattag atgtttcaac tgtgctcctg ttttgtcttg aaagtggcac cagaggtgct 180
 tctgcctgtg cagcgggtgc tgctggtaac agtggtgct tctctctctc tctctctttt 240
 ttgggggctc atttttgctg ttttgattcc cgggcttacc aggtgagaag tgaggaggga 300
 agaaggcagt gtcccttttg ctagagctga cagctttggt cgcgtgggca gagccttcca 360
 cagtgaatgt gtctggacct catgttggtg aggtgtcac agtcctgagt gtggacttgg 420
 caggtgcctg ttgaatctga gctgcaggtt ccttatctgt cacacctgtg cctcctcaga 480
 ggacagtttt tttgttggtg tgtttttttg tttttttttt ttggtagatg catgacttgt 540

gtgtgatgag agaatggaga cagagtccct ggctcctcta ctgtttaaca acatggcttt	600
cttatttttgt ttgaattgtt aattcacaga atagcacaaa ctacaattaa aactaagcac	660
aaagccattc taagtcattg gggaaacggg gtgaacttca ggtggatgag gagacagaat	720
agagtgatag gaagcgtctg gcagatactc cttttgccac tgctgtgtga ttagacaggc	780
ccagtgagcc gcggggcaca tgctggccgc tcctccctca gaaaaaggca gtggcctaaa	840
tcctttttta atgacttggc tcgatgctgt gggggactgg ctgggctgct gcaggccgtg	900
tgtctgtcag cccaaccttc acatctgtca cgttctccac acggggggaga gacgcagtcc	960
gcccaggctc ccgctttctt tggaggcagc agctcccgc gggctgaagt ctggcgtaag	1020
atgatggatt tgattcgccc tcctccctgt catagagctg cagggtggat tgttacagct	1080
tcgctggaaa cctctggagg tcctctcggc tgttcctgag aaataaaaag cctgtcattt	1140
c	1141

<210> 23
 <211> 247
 <212> DNA
 <213> Homo sapiens

<400> 23	
ccccggcgca gcgcgccgc agcagcctcc gcccccgca cgggtgtgagc gcccgacgcg	60
gccgaggcgg ccggagtccc gagctagccc cggcggccgc cgccgccag accggacgac	120
aggccacctc gtcggcgctc gcccgagtcc ccgcctcgcc gccaacgcca caaccaccgc	180
gcacggcccc ctgactccgt ccagtattga tcgggagagc cggagcgagc tcttcgggga	240
gcagcag	247

<210> 24
 <211> 1716
 <212> DNA
 <213> Homo sapiens

<400> 24	
tgaccacgga ggatagtatg agccctaaaa atccagactc tttcgatacc caggaccaag	60
ccacagcagg tcctccatcc caacagccat gccgcatta gctcttagac ccacagactg	120
gttttgcaac gtttacaccg actagccagg aagtacttcc acctcgggca ctttttggga	180
agttgcattc ctttgtcttc aaactgtgaa gcatttacag aaacgcatcc agcaagaata	240
ttgtcccttt gagcagaaat ttatctttca aagaggata ttgaaaaaa aaaaaaaag	300
tatatgtgag gatttttatt gattggggat cttggagttt ttcattgtcg ctattgattt	360
ttacttcaat gggctcttcc aacaaggaag aagcttgctg gtagcacttg ctaccctgag	420

ttcatccagg	cccaactgtg	agcaaggagc	acaagccaca	agtcttccag	aggatgcttg	480
attccagtg	ttctgcttca	aggcttccac	tgcaaaacac	taaagatcca	agaaggcctt	540
catggcccca	gcaggccgga	tcggtactgt	atcaagtcac	ggcaggtaca	gtaggataag	600
ccactctgtc	ccttctctgg	caaagaagaa	acggagggga	tgaattcttc	cttagactta	660
cttttgtaaa	aatgtcccca	cgggtacttac	tccccactga	tggaccagtg	gtttccagtc	720
atgagcggtta	gactgacttg	tttgtcttcc	attccattgt	tttgaaactc	agtatgccgc	780
ccctgtcttg	ctgtcatgaa	atcagcaaga	gaggatgaca	catcaaataa	taactcggat	840
tccagcccac	attggattca	tcagcatttg	gaccaatagc	ccacagctga	gaatgtggaa	900
tacctaagga	taacaccgct	tttgttctcg	caaaaacgta	tctcctaatt	tgaggctcag	960
atgaaatgca	tcaggtcctt	tggggcatag	atcagaagac	tacaaaaatg	aagctgctct	1020
gaaatctcct	ttagccatca	ccccaacccc	ccaaaattag	tttgtgttac	ttatggaaga	1080
tagttttctc	cttttacttc	acttcaaaag	ctttttactc	aaagagtata	tgttccttcc	1140
aggtcagctg	ccccaaacc	ccctccttac	gctttgtcac	acaaaaagtg	tctctgcctt	1200
gagtcaccta	ttcaagcact	tacagctctg	gccacaacag	ggcattttac	aggtgcgaat	1260
gacagtagca	ttatgagtag	tgtgaattca	ggtagtaa	atgaaactag	ggtttgaaat	1320
tgataatgct	ttcacaacat	ttgcagatgt	tttagaagga	aaaaagtcc	ttcctaaaat	1380
aatttctcta	caattggaag	attggaagat	tcagctagtt	aggagcccat	tttttcctaa	1440
tctgtgtgtg	ccctgtaacc	tgactgggtta	acagcagtc	tttgtaaaca	gtgttttaaa	1500
ctctcctagt	caatatccac	cccatccaat	ttatcaagga	agaaatgggt	cagaaaatat	1560
tttcagccta	cagttatgtt	cagtcacaca	cacatacaaa	atgttccttt	tgcttttaaa	1620
gtaatttttg	actcccagat	cagtcagagc	ccctacagca	ttgttaagaa	agtatttgat	1680
ttttgtctca	atgaaaataa	aactatattc	atttcc			1716

<210> 25
 <211> 160
 <212> DNA
 <213> Homo sapiens

<400> 25	tataaaagct	gggcccggcg	gggcccgggc	attcgcgacc	cggaggtgcg	cgggcgcggg	60
	cgagcagggt	ctccgggtgg	gcggcgcgac	gccccgcgca	ggctggaggc	cgccgaggct	120
	cgccatgccg	ggagaactct	aactccccca	tggagtcggc			160

<210> 26
 <211> 1306
 <212> DNA

<213> Homo sapiens

<400> 26

```
tgaggcgcg cgctgtggga ccgccctggg ccagcctccg gcggggaccc agggagtggg      60
ttggggtcgc cggatctcga ggcttgccca gaccgtgcga gccaggacta ggagattccg      120
gtgcctcctg aaagcctggc ctgctccgcg tgtcccctcc cttcctctgc gccggacttg      180
gtgcggtctaa gatgaggggg ccaggcgggtg gcttctccct gcgaggaggg gagaattctt      240
ggggctgagc tgggagcccc gcaactctag tatttaggat aacttgtgcc ttggaaatgc      300
aaactcaccg ctccaatgcc tactgagtag ggggagcaaa tcgtgccttg tcattttatt      360
tggagggtttc ctgcctcctt cccgaggcta cagcagaccc ccatgagaga aggaggggag      420
caggccccgtg gaggaggggg gctcaggag ctgagatccc gacaagcccc ccagccccag      480
ccgctcctcc acgcctgtcc ttagaaaggg gtggaaacat agggacttgg ggcttgaac      540
ctaaggttgt tccctagttc tacatgaagg tggagggtctc tagttccacg cctctccac      600
ctccctccgc acacacccca cccagcctgc tataggctgg ctttcccttg gggctggaac      660
tcaactgcgat ggggtcacca ggtgaccagt ggagccccca ccccgagtca gaccagaaag      720
ctaggctcgtg ggtcagctct gaggatgtat acccctgggtg ggagagggag acctagagat      780
ctggctgtgg ggcgggcatg gggggtgaag ggccactggg accctcagcc ttgtttgtac      840
tgtatgcctt cagcattgcc taggaacacg aagcacgac agtccatcca gagggaccgg      900
agttatgaca agcttcccaa atattttgct ttatcagccg atatcaacac ttgtatctgg      960
cctctgtgcc cagcagtgcc ttgtgcaatg tgaatgtacc gtctctgcta aaccaccatt     1020
ttatttggtt ttgttttgtt tggttttctc ggatacttgc caaaatgaga ctctccgtcg     1080
gcagctgggg gaagggtctg agactctctt tccttttggg tttgggatta cttttgatcc     1140
tgggggacca atgaggtgag gggggttctc ctttgccctc agctttccca gccctccggc     1200
ctgggctgcc cacaaggctt ctccccaga ggccctggct cctggtcggg aagggaggtg     1260
cctcccgcca acgcatcact ggggctggga gcagggaagg gaattc                       1306
```

<210> 27

<211> 216

<212> DNA

<213> Homo sapiens

<400> 27

```
agcgagagcg cccccgagca gcgcccgcgc cctccgcgcc ttctccgccg ggacctcgag      60
cgaaagacgc ccgcccgcgc cccagccctc gcctccctgc ccaccgggca caccgcgcgc      120
ccaccccgac cccgctgcgc acggcctgtc cgctgcacac cagcttggtg gcgtcttcgt      180
cgccgcgctc gccccgggct actcctgcgc gccaca                               216
```

<210> 28
 <211> 687
 <212> DNA
 <213> Homo sapiens

<400> 28
 taaatgctac ctgggtttcc agggcacacc tagacaaaca rgggagaaga gtgtcagaat 60
 cagaatcatg gagaaaatgg gcgggggtgg tgtgggtgat gggactcatt gtagaaagga 120
 agccttgctc attcttgagg agcattaagg tatttcgaaa ctgccaaagg tgctgggtgcg 180
 gatggacact aatgcagcca cgattggaga atactttgct tcatagtatt ggagcacatg 240
 ttactgcttc attttggagc ttgtggagtt gatgactttc tgttttctgt ttgtaaatta 300
 tttgctaagc atattttctc taggcttttt tccttttggg gttctacagt cgtaaaagag 360
 ataataagat tagttggaca gtttaaagct tttattcgtc ctttgacaaa agtaaaggg 420
 agggcattcc atcccttcct gaaggggggac actccatgag tgtctgtgag aggcagctat 480
 ctgcactcta aactgcaaac agaaatcagg tgttttaaga ctgaatgttt tatttatcaa 540
 aatgtagctt ttggggaggg aggggaaatg taatactgga ataatttgta aatgatttta 600
 attttatatt cagtgaaaag attttattta tggaattaac catttaataa agaaatatat 660
 acctaataaaa aaaaaaaaaa aaaaaaa 687

<210> 29
 <211> 310
 <212> DNA
 <213> Homo sapiens

<400> 29
 cgccccaga aaacccgagc gagtaggggg cggcgcgcag gagggaggag aactgggggc 60
 gcgggaggct ggtgggtgtc gggggtggag atgtagaaga tgtgacgccg cgccccggcg 120
 ggtgccagat tagcggacgg ctgcccgcgg ttgcaacggg atcccgggcg ctgcagcttg 180
 ggaggcggct ctccccaggc ggcgtccgcg gagacacca tccgtgaacc ccagggtccc 240
 ggccgcggc tcgccgcgca ccagggggccg gcggacagaa gagcggccga gcggctcgag 300
 gctgggggac 310

<210> 30
 <211> 5882
 <212> DNA
 <213> Homo sapiens

<400> 30
 ctgctaagag ctgattttaa tggccacatc taatctcatt tcacatgaaa gaagaagtat 60

attttagaaa	tttggttaatg	agagtaaaaag	aaaataaatg	tgtatagctc	agtttggata	120
attgggtcaaa	caatttttta	tccagtagta	aaatatgtaa	ccattgtccc	agtaaagaaa	180
aataacaaaa	gttgtaaaaat	gtatatcttc	cctttttatat	tgcattctgct	gttaccagct	240
gaagcttacc	tagagcaatg	atctttttca	cgcatttgct	ttattcgaaa	agaggctttt	300
aaaatgtgca	tgttttagaaa	caaaatttct	tcattggaaat	catatacatt	agaaaatcac	360
agtcagatgt	ttaatcaatc	caaaatgtcc	actatttctt	atgtcattcg	ttagtctaca	420
tgttttctaaa	catataaatg	tgaatttaaat	caatttccttt	catagtttta	taattctctg	480
gcagttcctt	atgatagagt	ttataaaaaca	gtcctgtgta	aactgctgga	agttcttcca	540
cagtcaggtc	aattttgtca	aacccttctc	tgtaccata	cagcagcagc	ctagcaactc	600
tgctgggtgat	gggagttgta	ttttcagctc	tcgccaggtc	attgagatcc	atccactcac	660
atcttaagca	ttcttctctg	caaaaattta	tgggtgaatga	atatggcttt	aggcggcaga	720
tgatatacat	atctgacttc	ccaaaagctc	caggatttgt	gtgctgttgc	cgaataactca	780
ggacggacct	gaattctgat	tttataccag	tctcttcaaa	aacttctcga	accgctgtgt	840
ctcctacgta	aaaaaagaga	tgtacaaatc	aataataatt	acacttttag	aaactgtatc	900
atcaaagatt	ttcagttaaa	gtagcattat	gtaaaggctc	aaaacattac	cctaacaaag	960
taaagttttc	aatacaaatt	ctttgccttg	tggatatcaa	gaaatcccaa	aatattttct	1020
taccactgta	aattcaagaa	gcttttgaaa	tgctgaatat	ttctttggct	gctacttgga	1080
ggcttatcta	cctgtacatt	tttggggta	gctcttttta	acttcttgct	gctctttttc	1140
ccaaaaggta	aaaatataga	ttgaaaagtt	aaaacatttt	gcatggctgc	agttcctttg	1200
tttcttgaga	taagattcca	aagaacttag	attcatttct	tcaacaccga	aatgctggag	1260
gtgtttgatc	agttttcaag	aaacttgga	tataaataat	tttataattc	aacaaaggtt	1320
ttcacatttt	ataaggttga	tttttcaatt	aaatgcaa	ttgtgtggca	ggatttttat	1380
tgccattaac	atatttttgt	ggctgctttt	tctacacatc	cagatggctc	ctctaactgg	1440
gctttctcta	attttgtgat	gttctgtcat	tgtctcccaa	agtatttagg	agaagccctt	1500
taaaaagctg	ccttcctcta	ccactttgct	ggaaagcttc	acaattgtca	cagacaaaga	1560
tttttgttcc	aataactcgt	ttgcctctat	ttttcttggt	tgtcaaatag	taaatgatat	1620
ttgcccttgc	agtaattcta	ctgggtgaaa	acatgcaaag	aagaggaagt	cacagaaaca	1680
tgtctcaatt	cccatgtgct	gtgactgtag	actgtcttac	catagactgt	cttaccatc	1740
ccctggatat	gctcttggtt	tttccctcta	atagctatgg	aaagatgcat	agaaagagta	1800
taatgtttta	aaacataagg	cattcatctg	ccatttttca	attacatgct	gacttccctt	1860
acaattgaga	tttgcccata	ggttaaaca	ggttagaaac	aactgaaagc	ataaaagaaa	1920

aatctaggcc	gggtgcagt	gctcatgcct	atattccctg	cactttggga	ggccaaagca	1980
ggaggatcgc	ttgagcccag	gagttcaaga	ccaacctggg	gaaaccccgt	ctctacaaaa	2040
aaacacaaaa	aatagccagg	catggtggcg	tgtacatgtg	gtctcagata	cttgggaggc	2100
tgaggtggga	gggttgatca	cttgaggctg	agaggtcaag	gttgcaagtga	gccataatcg	2160
tgccactgca	gtccagccta	ggcaacagag	tgagactttg	tctcaaaaaa	agagaaattt	2220
tccttaataa	gaaaagtaat	ttttactctg	atgtgcaata	catttgttat	taaatttatt	2280
atttaagatg	gtagcactag	tcttaaattg	tataaaatat	cccctaacat	gtttaaatgt	2340
ccattttttat	tcattatgct	ttgaaaaata	attatgggga	aatacatggt	tgttattaaa	2400
tttattatta	aagatagtag	cactagtctt	aaatttgata	taacatctcc	taacttgttt	2460
aatgtccat	ttttattctt	tatgcttgaa	aataaattat	ggggatccta	tttagctctt	2520
agtaccacta	atcaaaagtt	cggcatgtag	ctcatgatct	atgctgtttc	tatgtcgtgg	2580
aagcaccgga	tgggggtagt	gagcaaactc	gccctgctca	gcagtcacca	tagcagctga	2640
ctgaaaatca	gcactgcctg	agtagttttg	atcagtttaa	cttgaatcac	taactgactg	2700
aaaattgaat	gggcaaataa	gtgcttttgt	ctccagagta	tgcgggagac	ccttccacct	2760
caagatggat	atttcttccc	caaggatttc	aagatgaatt	gaaattttta	atcaagatag	2820
tgtgctttat	tctgttgtat	tttttattat	tttaatatat	tgtaagccaa	actgaaataa	2880
catttgctgt	tttatagggt	tgaagaacat	aggaaaaact	aagaggtttt	gtttttattt	2940
ttgctgatga	agagatatgt	ttaaatatgt	tgtattgttt	tgtttagtta	caggacaata	3000
atgaaatgga	gtttatattt	gttatttcta	ttttgttata	tttaataata	gaattagatt	3060
gaaataaaat	ataatgggaa	ataatctgca	gaatgtgggt	ttcctgggtg	ttcctctgac	3120
tctagtgcac	tgatgatctc	tgataaggct	cagctgcttt	atagttctct	ggctaatagca	3180
gcagatactc	ttcctgccag	tggttaatacg	attttttaag	aaggcagttt	gtcaatttta	3240
atcttggtga	tacctttata	ctcttagggg	attattttat	acaaaagcct	tgaggattgc	3300
attctatttt	ctatatgacc	ctcttgatat	ttaaaaaaca	ctatggataa	caattcttca	3360
tttacctagt	attatgaaag	aatgaaggag	ttcaaacaaa	tgtgtttccc	agttaactag	3420
ggtttactgt	ttgagccaat	ataaatgttt	aactgtttgt	gatggcagta	ttcctaaagt	3480
acattgcatg	ttttcctaaa	tacagagttt	aaataatttc	agtaattctt	agatgattca	3540
gcttcatcat	taagaatatc	ttttgtttta	tgttgagtta	gaaatgcctt	catatagaca	3600
tagtctttca	gacctctact	gtcagttttc	atttctagct	gctttcaggg	ttttatgaat	3660
tttcaggcaa	agctttaatt	tatactaagc	ttaggaagta	tggctaattgc	caacggcagt	3720

ttttttcttc	ttaattccac	atgactgagg	catatatgat	ctctgggtag	gtgagttggt	3780
gtgacaacca	caagcacttt	tttttttttt	aaagaaaaaa	aggtagtgaa	tttttaatca	3840
tctggacttt	aagaaggatt	ctggagtata	cttaggcctg	aaattatata	tatttggttt	3900
ggaaatgtgt	ttttcttcaa	ttacatctac	aagtaagtac	agctgaaatt	cagaggaccc	3960
ataagagttc	acatgaaaaa	aatcaattca	tttgaaaagg	caagatgcag	gagagaggaa	4020
gccttgcaaa	cctgcagact	gctttttgcc	caatatagat	tgggtaaggc	tgcaaacat	4080
aagcttaatt	agctcacatg	ctctgctctc	acgtggcacc	agtggatagt	gtgagagaat	4140
taggctgtag	aacaaatggc	cttctctttc	agcattcaca	ccactacaaa	atcatctttt	4200
atatcaacag	aagaataagc	ataaactaag	caaaagggtca	ataagtacct	gaaaccaaga	4260
ttggctagag	atatatctta	atgcaatcca	ttttctgatg	gattgttacg	agttggctat	4320
ataatgtatg	tatggtattt	tgatttgtgt	aaaagtttta	aaaatcaagc	tttaagtaca	4380
tggacatttt	taaataaaat	atttaaagac	aatttagaaa	attgccttaa	tatcattggt	4440
ggctaaatag	aataggggac	atgcatatta	aggaaaagggt	catggagaaa	taatattggt	4500
atcaaacaaa	tacattgatt	tgtcatgata	cacattgaat	ttgatccaat	agtttaagga	4560
ataggtagga	aaatttggtt	tctatttttc	gatttcctgt	aatcagtga	cataaataat	4620
tcttagctta	ttttatattt	ccttgtctta	aatactgagc	tcagtaagtt	gtgttagggg	4680
attatttctc	agttgagact	ttcttatatg	acattttact	atgttttgac	ttcctgacta	4740
ttaaaaataa	atagtagaaa	caattttcat	aaagtgaaga	attatataat	cactgcttta	4800
taactgactt	tattatattt	atttcaaagt	tcatttaaag	gctactattc	atcctctgtg	4860
atggaatggt	caggaatttg	ttttctcata	gtttaattcc	aacaacaata	ttagtcgtat	4920
ccaaaataac	ctttaatgct	aaactttact	gatgtatata	caaagcttct	ccttttcaga	4980
cagattaatc	cagaagcagt	cataaacaga	agaatagggtg	gtatgttcct	aatgatatta	5040
tttctactaa	tggaataaac	tgtaatatta	gaaattatgc	tgctaattat	atcagctctg	5100
aggtaatttc	tgaaatgttc	agactcagtc	ggaacaaatt	ggaaaattta	aattttttatt	5160
cttagctata	aagcaagaaa	gtaaacacat	taatttcctc	aacattttta	agccaattaa	5220
aaatataaaa	gatacacacc	aatatcttct	tcaggctctg	acaggcctcc	tggaacttcc	5280
cacatatattt	tcaactgcag	tataaagtca	gaaaataaag	ttaacataac	tttactaac	5340
acacacatat	gtagatttca	caaaatccac	ctataattgg	tcaaagtggg	tgagaatata	5400
tttttttagta	attgcatgca	aaatttttct	agcttccatc	ctttctccct	cgtttcttct	5460
ttttttgggg	gagctggtaa	ctgatgaaat	cttttcccac	cttttctctt	caggaaatat	5520
aagtgggtttt	gtttgggttaa	cgtgatacat	tctgtatgaa	tgaacattg	gagggaaaca	5580

tctactgaat ttctgtaatt taaaatattt tgctgctagt taactatgaa cagatagaag	5640
aatcttacag atgctgctat aaataagtag aaaatataaa tttcatcact aaaatatgct	5700
attttaaaaat ctatttccta tattgtattt ctaatcagat gtattactct tattatttct	5760
attgtatgtg ttaatgattt tatgtaaaaa tgtaattgct tttcatgagt agtatgaata	5820
aaattgatta gtttgtgttt tcttgtctcc cgaaaaaaaa aaaaaaaaaa aaaaaaaaaa	5880
aa	5882

<210> 31
 <211> 310
 <212> DNA
 <213> Homo sapiens

<400> 31	
cgccccaga aaacccgagc gagtaggggg cggcgcgcag gagggaggag aactgggggc	60
gcgggaggct ggtgggtgtc gggggtggag atgtagaaga tgtgacgccg cggcccggcg	120
ggtgccagat tagcggacgg ctgcccgcg ttgcaacggg atcccgggcg ctgcagcttg	180
ggaggcggct ctcccaggc ggcgctccgc gagacacca tccgtgaacc ccaggctccg	240
ggccgccggc tcgccgcga ccaggggccc gcggacagaa gagcggccga gcggctcgag	300
gctgggggac	310

<210> 32
 <211> 3212
 <212> DNA
 <213> Homo sapiens

<400> 32	
tgagggcgcc aggcaggcgg gcgccaccgc caccgcagc gagggcggag ccggccccag	60
gtgctcccct gacagtcctt cctctccgga gcattttgat accagaaggg aaagcttcat	120
tctccttggt gttggttggt ttttcctttg ctctttcccc cttccatctc tgacttaagc	180
aaaagaaaaa gattacccaa aaactgtctt taaaagagag agagagaaaa aaaaaatagt	240
atgtgcataa ccctgagcgg tgggggagga gggttgtgct acagatgata gaggatttta	300
tacccaata atcaactcgt ttttatatta atgtacttgt ttctctgttg taagaatagg	360
cattaacaca aaggaggcgt ctcgggagag gattagggtc catcctttac gtgtttaaaa	420
aaaagcataa aaacatttta aaaacataga aaaattcagc aaaccatttt taaagtagaa	480
gagggtttta ggtagaaaaa catattcttg tgcttttcct gataaagcac agctgtagtg	540
gggttctagg catctctgta ctttgcttgc tcatatgcat gtagtcactt tataagtcac	600
tgtatgttat tatattccgt aggtagatgt gtaacctctt caccttattc atggctgaag	660

tcacctcttg gttacagtag cgtagcgtgg ccgtgtgcat gtcctttgcg cctgtgacca	720
ccacccaac aaaccatcca gtgacaaacc atccagtgga ggtttgctcg gcaccagcca	780
gcgtagcagg gtcgggaaaag gccacctgtc ccactcctac gatacgtac tataaagaga	840
agacgaaata gtgacataat atattctatt ttatactct tcctatTTTT gtagtgacct	900
gtttatgaga tgctggTTTT ctaccaacg gccctgcagc cagctcacgt ccaggttcaa	960
cccacagcta cttggtttgt gttcttcttc atattctaaa accattccat ttccaagcac	1020
tttcagtcca atagggtgtag gaaatagcgc tgtttttgtt gtgtgtgcag ggagggcagt	1080
tttctaattg aatggtttgg gaatatccat gtacttgttt gcaagcagga ctttgaggca	1140
agtgtggggc actgtggtgg cagtggaggt ggggtgtttg ggaggctgcg tgccagtcaa	1200
gaagaaaaag gtttgcattc tcacattgcc aggatgataa gttcctttcc ttttctttaa	1260
agaagttgaa gtttaggaat ctttggtgc caactggtgt ttgaaagtag ggacctcaga	1320
ggtttaccta gagaacaggt ggtttttaag ggttatctta gatgtttcac accggaaggt	1380
ttttaaacac taaaatatat aatttatagt taaggctaaa aagtatatTT attgcagagg	1440
atgttcataa ggccagtatg atttataaat gcaatctccc cttgatTTaa acacacagat	1500
acacacacac acacacacac acacacaaac cttctgcctt tgatgttaca gatttaatac	1560
agtttatTTT taaagataga tccttttata ggtgagaaaa aaacaatctg gaagaaaaaa	1620
accacacaaa gacattgatt cagcctgttt ggcgtttccc agagtcattc gattggacag	1680
gcatgggtgc aaggaaaatt aggggtactca acctaaagttc ggttccgatg aattcttatt	1740
ccctgccccT tcctttaaaa aacttagtga caaaatagac aatttgca ca tcttggttat	1800
gtaattcttg taatttttat ttaggaagtg ttgaaggagg gtggcaagag tgtggaggct	1860
gacgtgtgag ggaggacagg cgggaggagg tgtgaggagg aggctcccga ggggaagggg	1920
cggtgcccac accggggaca ggccgcagct ccattttctt attgcgctgc taccgttgac	1980
ttccaggcac ggtttgga aa tattcacatc gcttctgtgt atctctttca cattgtttgc	2040
tgctattgga ggatcagttt tttgttttac aatgtcatat actgccatgt actagtTTta	2100
gttttctctt agaacattgt attacagatg ccttttttgt agtttttttt ttttttatgt	2160
gatcaatttt gacttaattgt gattactgct ctattccaaa aaggttgctg tttcacaata	2220
cctcatgctt cacttagcca tgggtggacc agcgggcagg ttctgcctgc tttggcgggc	2280
agacacgcgg gcgcgatccc acacaggctg gcgggggccc gccccgaggc cgcgtgcgtg	2340
agaaccgcgc cgggtgcccc agagaccagg ctgtgtccct cttctcttcc ctgcgcctgt	2400
gatgctgggc acttcatctg atcgggggcg tagcatcata gtagttttta cagctgtgtt	2460

```

attcttttgcg tgtagctatg gaagttgcat aattattatt attattatta taacaagtgt 2520
gtcttacgtg ccaccacggc gttgtacctg taggactctc attcgggatg attggaatag 2580
cttctggaat ttgttcaagt tttgggtatg tttaatctgt tatgtactag tgttctgttt 2640
gttattgttt tgttaattac accataatgc taattttaaag agactccaaa tctcaatgaa 2700
gccagctcac agtgctgtgt gccccggcca cctagcaagc tgccgaacca aaagaatttg 2760
caccccgtcg cgggcccacg tggttggggc cctgccctgg cagggtcac cgtgtgctcg 2820
aggccatctc gggcacaggc ccaccccgcc ccacccctcc agaacacggc tcacgcttac 2880
ctcaaccatc ctggctgcgg cgtctgtctg aaccacgcgg gggccttgag ggacgctttg 2940
tctgtcgtga tggggcaagg gcacaagtcc tggatgttgt gtgtatcgag aggccaaagg 3000
ctggtggcaa gtgcacgggg cacagcggag tctgtcctgt gacgcgcaag tctgagggtc 3060
tgggcggcgg gcggctgggt ctgtgcattt ctggttgcac cgcggcgctt cccagcacca 3120
acatgtaacc ggcattgttc cagcagaaga caaaaagaca aacatgaaag tctagaaata 3180
aaactggtaa aacccccaaa aaaaaaaaaa aa 3212

```

```

<210> 33
<211> 1043
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (409)..(444)
<223> n = a, t, g or c

```

```

<400> 33
gcaccgcggc gagcttggct gcttctgggg cctgtgtggc cctgtgtgtc ggaaagatgg 60
agcaagaagc cgagcccgag gggcgccgc gacccctctg accgagatcc tgctgctttc 120
gcagccagga gcaccgtccc tccccggatt agtgcgtagc agcgccagc gccctggccc 180
ggagagtgga atgatccccg agggccaggg cgtcgtgctt ccgcgcgccc cgtgaaggaa 240
actggggagt cttgagggac ccccgactcc aagcgcgaaa accccggatg gtgaggagca 300
ggtactggcc cggcagcgag cggtcacttt tgggtctggg ctctgacggg gtcccctcta 360
tcgctgggtc ccagcctctg cccgttcgca gcctttgtgc gggtcgtgnc tgggggctcg 420
gggcgcgggg cgcggggcat gggncacgtg gctttgcgga ggttttgttg gactggggct 480
agacagtccc cgccaggag gagggcgga tttcggacgg ctctcgcggc ggtgggggtg 540
ggggtgggtc ggaggtctcc gcgggagttc agggtaaagg tcacggggcc ggggctgcgg 600
gccgcttcgg cgcgggaggt ccggatgac gcagtgcctg tcgggtcact agtgtgaacg 660

```

ctgcgcgtag tctgggcggg attgggccgg ttcagtgggc aggttgactc agcttttcct	720
cttgagctgg tcaagttcag acacgttccg aaactgcagt aaaaggagtt aagtcctgac	780
ttgtctccag ctggggctat ttaaaccatg cattttccca gctgtgttca gtggcgattg	840
gagggtagac ctgtgggcac ggacgcacgc cactttttct ctgctgatcc aggtaagcac	900
cgacttgctt gtagctttag ttttaactgt tgtttatggt ctttatatat gatgtatttt	960
ccacagatgt ttcattgattt ccagttttca tctgtgtctt tttttccttg taggcaaagt	1020
tgcaatacca acatgtctgt acc	1043

<210> 34
 <211> 1153
 <212> DNA
 <213> Homo sapiens

<400> 34	
tagttgacct gtctataaga gaattatata tttctaacta tataacccta ggaattttaga	60
caacctgaaa tttattcaca tatatcaaag tgagaaaatg cctcaattca catagatttc	120
ttctcttttag tataattgac ctactttggg agtggaatag tgaataactta ctataatttg	180
acttgaatat gtagctcatc ctttacacca actcctaatt ttaaataatt tctactctgt	240
cttaaatgag aagtacttgg tttttttttt cttaaatatg tatatgacat ttaatgttaa	300
cttattattt tttttgagac cgagtcttgc tctgttacct aggctggagt gcagtgggtg	360
atcttggtc actgcaagct ctgccctccc cgggttcgca ccattctcct gcctcagcct	420
cccaattagc ttggcctaca gtcactctgcc accacacctg gctaattttt tgtactttta	480
gtagagacag ggtttcaccg tgtagccag gatgggtctcg atctcctgac ctctgtatcc	540
gcccacctcg gcctcccaa gtgctgggat tacaggcatg agccaccgtg ctctccagcc	600
taggcaacag agtgagactc tgtctccaaa aaaaaaaaaa aaaaaagggg actataacac	660
ccccagggaa agggacaggt gggacattct tattcttaat ttaaataaat tgacagggga	720
aagttgggcc actcttgagc ttgtgggtgc tcaccagggt gaccccaaaa aaagaagcct	780
tccacaaaac attaatattt ttccctaata taccgcctc tgtgagttaa gggataatgc	840
atcaggactc ttgcaaccag acaaaattat ttaaaaacgc cacttggggg ggaggcgggt	900
ccctcctggg gattcgcctt tgtgggagag aaaactgcac agacttgggc aaataatgtt	960
ttttgtcacc ccaaaacgta ttcgcgagac atttcattag aacgaagctt taccctaata	1020
ttgaactccc catttaaaca gtttccacac acacttaggg agatttttcc ctctgtgagt	1080
tccgcagaac aatagttgga cgggaataga accctgaaac acttttagttc accacgaact	1140
attatagggc ggg	1153

<210> 35
 <211> 334
 <212> DNA
 <213> Homo sapiens

<400> 35
 tgactatcca gctctgagag acgggagttt ggagttgccc gctttacttt ggttgggttg 60
 gggggggcgg cgggctgttt tgttcctttt cttttttaag agttgggttt tcttttttaa 120
 ttatccaaac agtgggcagc ttcctcccc acaccaagt atttgacaaa tatttgtgcg 180
 gggatatggg gtgggttttt aaatctcggt tctcttggac aagcacaggg atctcgttct 240
 cctcattttt tgggggtgtg tggggacttc tcaggtcggt tccccagcct tctctgcagt 300
 cccttctgcc ctgccgggcc cgtcgggagg cgcc 334

<210> 36
 <211> 543
 <212> DNA
 <213> Homo sapiens

<400> 36
 tagctcagga ccttggctgg gcctggctgt catgtaggtc aggaccttgg ctggaccttg 60
 aggccctgcc cagccctgct ctgcccagcc cagcaggggc tccaggcctt ggctggcccc 120
 acatgcctt ttcctcccc acacctcgt gcacttgtgt ccgaggagcg aggagccctt 180
 cgggcccttg gtggcctctg ggccctttct cctgtctcgg cactccctc tggcggcgt 240
 ggccgtggct ctgtctctct gaggtgggtc gggcgccctc tgcccgcccc ctcccacacc 300
 agccaggctg gtctcctcta gcctgtttgt tgtgggggtg ggtatatatt tgtaaccact 360
 gggccccccag cccctctttt gcgacccctt gtcttgacct gttctcggca ccttaaatta 420
 ttagaccccg gggcagtcag gtgctccgga caccgaagg caataaaaca ggagccgtga 480
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 540
 aaa 543

<210> 37
 <211> 511
 <212> DNA
 <213> Homo sapiens

<400> 37
 gctcagcaag gggctccgtc ttctctgtca ctgtctcttt tgctgttgt aattctgtct 60
 gcctctcttg gactctgcct gtctcactct ttctgtctgt gcctctctc actcttgctc 120
 tttctgctg aatcacagcc ctgagttttt ctgtcctcat gcatttgtct ttgtggctct 180
 ttccgtcttt ctgcccttga caccatcccc tctcccagtg cttccctct gcttcagat 240

cgcttcatga cttaggcagg gaaacagagg tcagggcctc cttccagggt tccctctgca	300
tcttactgag tatgcagggtc ggaagagcct cgggtcctgc ctccgcgggt ggcctagagc	360
caaaggaagg cggagcccggt cggggcgagg ttggccctta gggccacctc ataaagcctg	420
gggtaggggg cacaacggcc ttgggaagga gccctgctgg ggccgtccag tccccagac	480
ctcacagggt cagtcgcgga tctgcagtgt c	511

<210> 38
 <211> 458
 <212> DNA
 <213> Homo sapiens

<400> 38	
tagtagggac cagtgaccat cacatccctt caagagtcc gaagatcaag ccagttctcc	60
ttccctgcag agctttggcc attaccacct gacctcttgc tgccagctaa taagaagtgc	120
caagtggaca gtctggccac tgtcaaggca ggggaagggg catgactttt ctgccctgcc	180
ctcagcctgt tgccctgcct cccaaacccc attagtctag ccttgtagct gttactgcaa	240
gtgtttcttc tggcttagtc tgttttctaa agccaggact attccctttc ctccccagga	300
atatgtgttt tcctttgtct taatcgatct ggtaggggag aaatggcgaa tgtcatacac	360
atgagatggt atacccttgc gatgtacaga atcagaagggt ggtttgacag catcataaac	420
aggctgactg gcaggaatga aaaaaaaaaa aaaaaaaaaa	458

<210> 39
 <211> 270
 <212> DNA
 <213> Homo sapiens

<400> 39	
ggggccgccc agagccgcag cgcgcctcgc ccgcgcgcgc ccaccccgcc gccccgccc	60
gcgaattgcg ccccgcgccc tcccctcgcg ccccgagac aaagaggaga gaaagtttgc	120
gcggccgagc gggcagggtga ggaggggtgag ccgcgcggag gggcccgcc cggccccggc	180
tcagcccccg cccgcgccc cagcccgccg ccgcgagcag cggccggacc cccagcggc	240
ggccccgccc gcccagcccc ccggcccgcc	270

<210> 40
 <211> 751
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (535)..(739)
 <223> n = a, t, g or c

<400> 40
taagcaggcc tccaacgccc ctgtggccaa ctgcaaaaaa agcctccaag ggtttcgact 60
ggtccagctc tgacatccct tcctggaaac agcatgaata aaacactcat cccatgggtc 120
caaattaata tgattctgct ccccccttct ccttttagac atggttgtgg gtctggaggg 180
agacgtgggt ccaaggtcct catcccatcc tccctctgcc aggcactatg tgtctggggc 240
ttcgatcctt ggggtgcaggc agggctggga cacgcggctt cctcccaagt cctgccttg 300
gcaccgtcac agatgccaag caggcagcac ttagggatct cccagctggg ttagggcagg 360
gcctggaaat gtgcattttg cagaaacttt tgagggtcgt tgcaagactg tgtagcaggc 420
ctaccaggtc cctttcatct tgagagggaac atggccccctt gttttctgca gcttcacgc 480
ctctgcactc cctgcccctg gcaagtgtc ccatcgcccc cggtgccac catgnagctc 540
cccgcacctg actccccca catccaaggg cagccctgga accagtgggc tagttccttg 600
aaggaagccc cactcattcc tattaatccc tcagaattcc cgggggggagc cttccctcct 660
gaaccttggg aaaaaatggg gaacgagaaa aacccccgct tggagctgtg cgtttcagc 720
ccctacttga gagncttttt tttggggggc g 751

<210> 41
<211> 229
<212> DNA
<213> Homo sapiens

<400> 41
cgcgcggggc ccggctcggc ccgaccggc tccgcgcggg caggcggggc ccagcgcact 60
cggagcccga gcccagaccg cagccgccgc ctggggcgct tgggtcggcc tcgaggacac 120
cggagagggg cgccacgccg ccgtggccgc agatttgaaa gaagccgaca ctaaaccacc 180
aatatacaac aaggccattt tgtcaaacga gagtcagcct ttaacgaaa 229

<210> 42
<211> 233
<212> DNA
<213> Homo sapiens

<400> 42
tagcagagag tcctgagcca ctgccaatat ttcccttctt ccagttgcac tattctgagg 60
gaaaatctga cacctaagaa atttactgtg aaaaagcatt ttaaaaagaa aaggtttttag 120
aatatgatct attttatgca tattgtttat aaagacacat ttacaattta cttttaatat 180
taaaaattac catattatga aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 233

<210> 43
<211> 349

<212> DNA
<213> Homo sapiens

<400> 43
ggcacgaggg gcgagaggaa gcagggagga gagtgatttg agtagaaaag aaacacagca 60
ttccaggctg gccccacctc tatattgata agtagccaat gggagcgggt agccctgata 120
cctggccaat ggaaactgag gtaggcgggt catcgcgctg gggctctgtag tctgagcgct 180
acccggttgc tgctgcccaa ggaccgcgga gtcggacgca ggcagaccat gtggaccctg 240
gtgagctggg tggccttaac agcagggtg gttggctggaa cgcggtgccc agatggctcag 300
ttctgccttg tggcctgctg cctggacccc ggaggagcca gctacagct 349

<210> 44
<211> 337
<212> DNA
<213> Homo sapiens

<400> 44
tgagggacag tactgaagac tctgcagccc tcgggacccc actcggaggg tgccctctgc 60
tcaggcctcc ctagcacctc cccctaacca aattctccct ggaccccatt ctgagctccc 120
catcaccatg ggaggtgggg cctcaatcta aggccttccc tgtcagaagg gggttgtggc 180
aaaagccaca ttacaagctg ccatcccctc ccggtttcag tggaccctgt ggccagggtgc 240
ttttccctat ccacaggggt gtttgtgtgt gtgcgcgtgt gcgtttcaat aaagtttgta 300
cactttcaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 337

<210> 45
<211> 1700
<212> DNA
<213> Homo sapiens

<400> 45
tgtttgcatt aagtcatag attataattt gtaatggaat caacaccaaa tgcaaattag 60
aaagagagcc cactttgctc acccagtcac gtcttcccat gtaaccatag aacgttgggg 120
tcctgtgtct ttctagatcc acagtcttgc tctcagaaca ggctagccac accacaggcc 180
tagtgccagg acccatggcc tttttttaag ctcagactcc cttctgtgaa cagcaatata 240
cccacaactt gtacaacatt ggtgcttccct gcaagggtcta cagaactatt tgatacgaaa 300
atgttcattg acttacacac aagagaagca caaaataaaa aattaataat taatttaatg 360
tctttgaaaa tgtaccattt atttttacat ttgggggtcat aagaattgta ttacacttaa 420
gaatgcaata caatttgaag atcagatttt tctccctttg tgagaatttc tcagtatgtg 480
tgatgactac caagaaatca tagccagtca taaattcagt gagttactca taaacgaaca 540
agaaccacct acttcttggg gaggtagggtc tgcttccctt caactcagga tacaactgct 600

ttcaactgct	ttcttcacat	tagctgacta	attagctaga	agcctgtcgt	aaacaatttt	660
atggttgact	ccttccctgg	gctcagggtt	ccctagaaca	gagaggtccc	caaatcccgg	720
tctgtggcct	gtccgcctaa	gctctgcctc	ctgccagatc	agcaggcagc	attagattct	780
cataggagct	ggacgcctat	tgtgaactgc	gcatgtgcgg	gatccagatt	gtgcactctt	840
tatgagaatc	taactaatgc	ttgatgatct	atctgaacca	gaacaatttc	atcctgaaac	900
catccccac	caatccatag	aaatactgtc	ttccacaaaa	atgatccctg	gtgccaaaaa	960
tgtagagac	cactccccta	aaactctctt	cttagctctc	acctcctgta	ttactatctc	1020
atctcagtac	attgaagccc	ccatcttttc	cccatggatg	cctcatttcc	tattagggag	1080
gcattttttt	attttttgtt	tttatttttt	tccgagacgg	agtctcgctc	tgctgccaaag	1140
gctggagtgc	agtggcgcg	tctcggtca	ctgcaagctc	cgcctcccgg	gttcacgcca	1200
ttctcctgcc	tcagcctccc	aagtagctgg	gactacaggc	gcccgcacta	cgcccggtta	1260
attttttgta	tttttagtag	agacgggggt	tcaccgtggt	agccaggatg	gtctcgatct	1320
cctgacctcg	tgatccgccc	gccttggcct	cccaaagtgc	tgggattaca	ggcgtgagac	1380
cgcgcccggc	cgtcatttgg	tatgtcttaa	tgtgcctcag	gacctagcac	agtccttggg	1440
accagtaga	gacctatgta	atgttcgtta	ttcaataata	aatacatgaa	ttaaagagtg	1500
agagtggatt	ttgtaatgtt	acgactgata	gagaaatact	cagtgattct	aagggatggg	1560
gaagaacggt	tggagctaga	ggttgtgctc	aggaaactat	taaatagacg	ttccgcagga	1620
agggattgac	gaagtgtgag	gttaatgagg	aagggaatat	agaatataaa	atttggtggt	1680
ggaaaagatc	tgattcatga					1700

<210> 46
 <211> 2419
 <212> DNA
 <213> Homo sapiens

<400> 46	
taaccagcgg	gcccctggtc aagtgtggc tctgctgtcc ttgccttcca tttcccctct 60
gcaccagaa	cagtgggtggc aacattcatt gccaaaggcc caaagaaaga gctacctgga 120
ccttttgttt	tctgtttgac aacatgttta ataaataaaa atgtcttgat atcagtaaga 180
atcagagtct	tctcactgat tctgggcata ttgatctttc ccccatthtc tctacttggc 240
tgctccctga	gaggactgca taggatagaa atgccttttt cttttctttt cgtttttttt 300
tttttttttt	tttgagatgg agtctcactc tgtcgcccag gcttaagtgc aatggcacia 360
tctcggtca	ctgcaacctc tctctcctgg gttcaagtga ttctcctgcc tcagcctccc 420
aaatagctga	gattacaggc atgcaccacc acacctggct aatttttgtg ttttttagtag 480

agacaggggtt	tcaccgtttt	ggccaggttg	gtcttgaact	cctgacctcg	ggagatccgc	540
ccaccttggc	ctctctttgt	gctgggatta	caggcatgag	ccactgagcc	gggccacttt	600
ttccttatca	gtcagttttt	acaagtcatt	agggaggtag	actttacctc	tctgtgaagg	660
aaagtatggg	atgttgatct	acagagagag	atggaaaaat	tccagggctc	gtagctacta	720
agcagaattt	ccaagatagg	caaattgttt	tttctgtcaa	ataataagct	aatattactt	780
ctacaaatat	gagaccttgg	agagaagttt	ccaaggacca	agtaccaaca	taccaacaga	840
ttattatagt	ttctctcact	cttacacaca	cacacacaca	tatacacata	tgtaatccag	900
catgaatacc	aaaattcatt	cagggtagcc	accttttgtc	ttaatcgaga	gataattttg	960
atgtttgaat	ggaatgctcc	caggatatcc	tcttgtcatg	gttattttat	ataaaattca	1020
aaaaccaatt	acattatttc	ctctgtaatc	ttttacttta	tcaactaatg	tctggcaagt	1080
gtgatgtttt	ggggaagtta	tagaagattc	cggccaggcg	cttatctcac	gcttgtaatc	1140
cagcactttg	ggaagctgag	gcggacagat	cacgaggtca	agagatcaag	accatcctgg	1200
acaacatggg	gaaaccttgt	ctctactaaa	aatgtgaaaa	ttagctgggc	gtgggtggcac	1260
acacctatag	tcccagctac	tcgggagggt	gaggcaggag	aatcgcttga	acctaggagg	1320
cggaggttgc	actgagccga	gatcacgcca	ctgcactcca	gcctgggcga	cagagcgaga	1380
ctccatctca	aaaaaaaaaa	aaaaagaaag	atcccagttt	atcccagttt	atcccttatt	1440
cttcctcaat	tctcaagatt	tgtttttaag	ttaacataac	ttaggttaac	acactctttg	1500
taaaatacac	tgttcaatct	acagactcag	tggttagctt	cctgttaact	aatttctggt	1560
gacaggtact	tggatatttt	atttagaaag	tggttgccaa	taaattagtt	ataagtcgcc	1620
agtttcactg	ccttgtgaac	acataattat	tgtgggtctca	gtattcccta	tggtggcttc	1680
tcctgctcct	ggtattgccc	tgaaatgggc	caaaagccgt	ggctcccaa	tgctcaggtt	1740
atagaacatt	gtccaggtac	cacctaggag	agcccagcct	cactgaaagt	attcaaattt	1800
aggaatgggt	ttgagaagta	ggtagctggg	atgtgcttag	cacaagaatc	tctcttcctt	1860
gggttagtct	gtttcaaaac	tgaaaacact	gtcattcctt	aagaaaatag	gaaaaagtat	1920
tccaaacctc	tgtcactaga	aaatttgcca	tattaccaa	tctcaaaaac	ctctcaggaa	1980
atgagaaagt	cccagtttct	ggtaaactat	ttgggccctt	ttctcaagtt	ctccttccag	2040
tgctatttcc	ttgaggtgag	gcāaagttac	tcaagatcat	cgctgccact	caaggccttg	2100
atagggcaag	tgaaaggcat	ggaccattat	tatattgatc	acagcataag	ctgtgaaaac	2160
ccacatcttc	tccaaacatc	tgcttggagc	attatcatcg	catagtttgc	tctggtgttc	2220
agggaaatcg	ctgtttcata	ggaaatcaca	tggcagtggg	atgggagtgt	ttcctgacct	2280

gccgatggta ctggcacctg agcaagcatt cctagtcctt tttgggtctgg gcctcttgtt	2340
ctatcacaac cacaagctgt ttaaaataaa aacgtcaagt cacaggcagg tcattttatc	2400
ctgcgtgaat caattgaag	2419

<210> 47
 <211> 297
 <212> DNA
 <213> Homo sapiens

<400> 47	
tcctcagtgc acagtgctgc ctcgctctgag gggacaggag gatcaccctc ttcgtcgcctt	60
cggccagtgt gtcgggctgg gccctgacaa gccacctgag gagaggctcg gagccggggc	120
cggacccccgg cgattgccgc ccgcttctct ctagtctcac gaggggtttc ccgcctcgca	180
ccccacctc tggacttgcc tttccttctc ttctccgcgt gtggaggagg ccagcgctta	240
ggccggagcg agcctggggg ccgcccgcgc tgaagacatc gcggggaccg attcacc	297

<210> 48
 <211> 1192
 <212> DNA
 <213> Homo sapiens

<400> 48	
tgagcttttt cttaatttca ttcctttttt tggacactgg tggctcacta cctaaagcag	60
tctatttata ttttctacat ctaatttttag aagcctggct acaatactgc acaaacttgg	120
ttagttcaat ttttgatccc ctttctactt aatttacatt aatgctcttt ttagtatgt	180
tctttaatgc tggatcacag acagctcatt ttctcagttt tttggtattt aaaccattgc	240
attgcagtag catcatttta aaaaatgcac ctttttatat atttattttt ggctagggag	300
tttatccctt tttcgaatta tttttaagaa gatgccata taatttttgt aagaaggcag	360
taacctttca tcatgatcat aggcagttga aaaattttta cacctttttt ttcacatttt	420
acataaataa taatgctttg ccagcagtac gtggtagcca caattgcaca atatattttc	480
ttaaaaaata ccagcagtta ctcatggaat atattctgcg tttataaaac tagtttttaa	540
gaagaaattt tttttggcct atgaaattgt taaacctgga acatgacatt gttaatcata	600
taataatgat tcttaaatgc tgtatggttt attattttaa tgggtaaagc catttacata	660
atatagaaaag atatgcatat atctagaagg tatgtggcat ttatttggat aaaattctca	720
attcagagaa atcatctgat gtttctatag tcactttgcc agctcaaaaag aaaacaatac	780
cctatgtagt tgtggaagtt tatgctaata ttgtgtaact gatattaaac ctaaagtgtc	840
tgcctaccct gttggtataa agatattttg agcagactgt aaacaagaaa aaaaaaatca	900
tgcattctta gcaaaattgc ctagtatgtt aatttgctca aaatacaatg tttgatttta	960

tgcactttgt cgctattaac atcctttttt tcatgtagat ttcaataatt gagtaatttt	1020
agaagcatta ttttaggaat atatagttgt cacagtaa atcttgtttt ttctatgtac	1080
attgtacaaa tttttcattc cttttgctct ttgtggttg atctaact aactgtattg	1140
ttttgttaca tcaaataaac atcttctgtg gaccaggaaa aaaaaaaaaa aa	1192

<210> 49
 <211> 197
 <212> DNA
 <213> Homo sapiens

<400> 49	
agacagcctt aaccacgagg cgcgggcgag tcgtatgggc aggggcaggc gggagcgacg	60
tggggcgacg ctacgaacg atcagagctg cgggcgacgc aacgaagccc ggaggccgca	120
ggctgcgcgc tccctcgag cagccgggag ggcaaaagcc cccagtcctc ggccccgcg	180
caagcgacgc cgggaaa	197

<210> 50
 <211> 3293
 <212> DNA
 <213> Homo sapiens

<400> 50	
taattattta tattgtaaag aattttaaca gtcttgggga cttccttgaa ggatcatttt	60
cacttttgct cagaagaaag ctctggatct atcaaataaa gaagtccttc gtgtgggcta	120
catatataga tgttttcatg aagaggagtg aaaagccaga aggatataga caaatgaggc	180
ctaagacctt tcttgccagt aactatactg tcagtagccg gcaaatgtta caagaaattc	240
gggaatccct taggaattta tctaaaccat ctgatgctgc taaggctgag cataacatga	300
gtaaaatgtc aaccgaagat cctcgacaag tcagaaatcc acccaaattt gggacgcac	360
ataaagcctt gcaggaaatt cgaaactctc tgcttccatt tgcaaatgaa acaaattctt	420
ctcggagtac ttcagaagtt aatccacaaa tgcttcaaga cttgcaagct gctggatttg	480
atgaggatat gggtatacaa gctcttcaga aaactaaca cagaagtata gaagcagcaa	540
ttgaattcat tagtaaaatg agttaccaag atcctcgacg agagcagatg gctgcagcag	600
ctgccagacc tattaatgcc agcatgaaac cagggaatgt gcagcaatca gttaacgca	660
aacagagctg gaaagggttct aaagaatcct tagttcctca gaggcattggc ccgccactag	720
gagaaagtgt ggcctatcat tctgagagtc ccaactcaca gacagatgta ggaagacctt	780
tgtctggatc tggtatatca gcatttggtc aagctcacc tagcaacgga cagagagtga	840
acccccacc accacctcaa gtaaggagtg ttactcctcc accacctcca agaggccaga	900

ctccccctcc aagaggtaca actccacctc ccccttcctg ggaaccaaac tctcaaacia	960
agcgctattc tggaaacatg gaatacgtaa tctcccgaat ctctcctgtc ccacctgggg	1020
catggcaaga gggctatcct ccaccacctc tcaacacttc ccccatgaat cctcctaate	1080
aaggacagag aggcattagt tctgttcctg ttggcagaca accaatcatc atgcagagtt	1140
ctagcaaatt taactttcca tcagggagac ctggaatgca gaatggtact ggacaaactg	1200
atttcatgat acacaaaaat gttgtccctg ctggcactgt gaatcggcag ccaccacctc	1260
catatcctct gacagcagct aatggacaaa gcccttctgc tttaaaaaa gggggatctg	1320
ctgctccttc gtcataataa aatggaagta ttcctcagtc tatgatggtg ccaaacagaa	1380
atagtcataa catggaacta tataacatta gtgtacctgg actgcaaaca aattggcctc	1440
agtcactctc tgctccagcc cagtcacccc cgagcagtggt gcatgaaatc cctacatggc	1500
aacctaacat accagtggag tcaaatctct ttaataaccc attaggaaat agagcaagtc	1560
actctgctaa ttctcagcct tctgctacaa cagtcactgc aattacacca gctcctattc	1620
aacagcctgt gaaaagtatg cgtgtattaa aaccagagct acagactgct ttagcaccta	1680
cacacccttc ttggatacca cagccaattc aaactgttca acccagtcct tttcctgagg	1740
gaaccgcttc aaatgtgact gtgatgccac ctggttgctga agctccaaac tatcaaggac	1800
caccaccacc ctacccaaaa catctgctgc accaaaaccc atctgttcct ccatacgagt	1860
caatcagtaa gcctagcaaa gaggatcagc caagcttgcc caaggaagat gagagtgaia	1920
agagttatga aaatgttgat agtggggata aagaaaagaa acagattaca acttcaccta	1980
ttactgttag gaaaaacaag aaagatgaag agcgaaggga atctcgtatt caaagttatt	2040
ctcctcaagc atttaaattc tttatggagc aacatgtaga aaatgtactc aaatctcatc	2100
agcagcgtct acatcgtaaa aaacaattag agaatgaaat gatgcggggt ggattatctc	2160
aagatgcca ggatcaaatg agaaagatgc tttgccaaaa agaattctaat tacatccgtc	2220
ttaaaagggc taaaatggac aagtctatgt ttgtgaagat aaagacacta ggaataggag	2280
catttggtga agtctgtcta gcaagaaaag tagatactaa ggctttgtat gcaacaaaaa	2340
ctcttcgaaa gaaagatgtt cttcttcgaa atcaagtcgc tcatgttaag gctgagagag	2400
atatcctggc tgaagctgac aatgaatggg tagttcgtct atattattca ttccaagata	2460
aggacaattt atactttgta atggactaca ttcctggggg tgatatgatg agcctattaa	2520
ttagaatggg catctttcca gaaagtctgg cacgattcta catagcagaa cttacctgtg	2580
cagttgaaag tggtcataaa atgggtttta ttcatagaga tattaacact gataatattt	2640
tgattgatcg tgatggtcat attaaattga ctgactttgg cctctgcact ggcttcagat	2700

ggacacacga	ttctaagtac	tatcagagtg	gtgaccatcc	acggcaagat	agcatggatt	2760
tcagtaatga	atgggggggat	ccctcaagct	gtcgatgtgg	agacagactg	aagccattag	2820
agcggagagc	tgcacgccag	caccagcgat	gtctagcaca	ttcttttggt	gggactccca	2880
attatatattgc	acctgaagtg	ttgctacgaa	caggatacac	acagtttgtgt	gattgggtgga	2940
gtgtttggtgt	tattcttttt	gaaatgttgg	tgggacaacc	tcctttcttg	gcacaaacac	3000
cattagaaac	acaaatgaag	gtcacctgct	gctatataca	tcattggctc	gagaagaaac	3060
tactgaacac	cctgcgagag	agaagcctag	aaaagaaaga	aagggccaaa	aggttttgaa	3120
ctcttcatcc	ctaatttgct	acactgatca	aaaccaagta	agggtcctg	aagtccatga	3180
gtctatcatc	aatcagcaca	aatgctatac	tagtttgtaa	ctgcgggggtc	agttgtgaag	3240
gggaaggaca	gcagtcttat	ccatattcca	ggaagccaca	gtaaactgct	cga	3293

<210> 51
 <211> 424
 <212> DNA
 <213> Homo sapiens

<400> 51	
cctactctat	tcagatattc tccagattcc taaagattag agatcatttc tcattctcct 60
aggagtactc	acttcaggaa gcaaccagat aaaagagagg tgcaacggaa gccagaacat 120
tcctcctgga	aattcaacct gtttcgcagt ttctcgagga atcagcattc agtcaatccg 180
ggccggggagc	agtcattctgt ggtgaggctg attggctggg caggaacagc gccggggcgt 240
gggctgagca	cagcgcttcg ctctctttgc cacaggaagc ctgagctcat tcgagtagcg 300
gctcttccaa	gctcaaagaa gcagaggccg ctgttcgttt ccttttaggtc tttccactaa 360
agtcggagta	tcttcttcca agatttcacg tcttggtggc cgttccaagg agcgcgaggt 420
cggg	424

<210> 52
 <211> 706
 <212> DNA
 <213> Homo sapiens

<400> 52	
tgaactctga	ctgtatgaga tggttaaatac tttttaatat ttgtttagat atgacattta 60
ttcaaagtta	aaagcaaaca cttacagaat tatgaagagg tatctgttta acatttcctc 120
agtcaagttc	agagtcttca gagacttcgt aattaaagga acagagtgag agacatcatc 180
aagtggagag	aatcatagt ttaaactgca ttataaattt tataacagaa ttaaagtaga 240
ttttaaaaga	taaaatgtgt aattttgttt atattttccc atttggtgctg taactgactg 300
ccttgctaaa	agattataga agtagcaaaa agtattgaaa tgtttgcata aagtgtctat 360

aataaaaacta aactttcatg tgactggagt catcttgctc aaactgcctg tgaatatatc	420
ttctctcaat tggaatattg tagataactt ctgcttttaa aaagttttct ttaaataatac	480
ctactcattt ttgtgggaat ggtaagcag tttaaataat tcctgtgtat atgtctatca	540
catagggggtc taacagaaca atctggattc attattttcta ggacttgatc ctgctgatgc	600
tgaatttgca cattaaggtg tgtaacaac caaaacacag atcgatataa gaagtaagga	660
ggtaggggaga ggcaaattat gatgtgctat gagttagatg tatagt	706

<210> 53
 <211> 239
 <212> DNA
 <213> Homo sapiens

<400> 53	
agtccgcggc gttccccggc tgcagccggg agggggccga ggagtgactg agccccgggc	60
tgtgcagtcc gacgccgact gaggcacgag cgggtgacgc tgggcctgca gcgcggagca	120
gaaagcagaa cccgcagagt cctccctgct gctgtgtgga cgacacgtgg gcacaggcag	180
aagtgggccc tgtgaccagc tgcactgggt tcgtggaagg aagctccagg actggcggg	239

<210> 54
 <211> 641
 <212> DNA
 <213> Homo sapiens

<400> 54	
tgaggcagct gctatcccca tctccctgcc tggcccccaa cctcagggct cccaggggtc	60
tccctggctc cctcctccag gcctgcctcc cacttcaactg cgaagaccct cttgccacc	120
ctgactgaaa gtagggggct ttctggggcc tagcgatctc tcctggccta tccgtgcca	180
gccttgagcc ctggctgttc tgtggttctt ctgctcaccg cccatcaggg ttctcttatac	240
aactcagaga aaaatgctcc ccacagcgtc cctggcgag gtgggctgga cttctacctg	300
ccctcaagggt tgtgtatatt gtataggggc aactgtatga aaaattgggg aggagggggc	360
cgggcgcggt gctcacgcct gtaatccag cactttggga ggccgaggcg ggtggatcac	420
gaggtcagga gatcgagacc atcctggcta acatggtgaa acccgtctc tactaaaaat	480
acaaaaaaaaa tttagccggg cgcggtggcg ggcacctgta gtcccagcta cttgggaggc	540
tgaggcagga gaatggtgtg aaccggggag cggaggttgc agtgagctga gatcgtgcta	600
ctgcactcca gcctggggga cagaaagaga ctccgtctca a	641

<210> 55
 <211> 493

<212> DNA
 <213> Homo sapiens

<400> 55
 tttctgtgaa gcagaagtct gggaaatcgat ctggaaatcc tcctaatttt tactccctct 60
 ccccccgact cctgattcat tgggaagttt caaatcagct ataactggag agagctgaag 120
 attgatggga tcgttgccctt atgcctttgt tttggtttta caaaaaggaa acttgacaga 180
 ggatcatgct atacttaaaa aataacaacat cgcagaggaa gtagactcat attaaaaata 240
 ctactaata ataacgtgcc tcatgaagta aagatccgaa aggaattgga ataaaacttt 300
 cctgcattctc aagccaaggg ggaaacacca gaatcaagtg ttccgcgtga ttgaagacac 360
 cccctcgtcc aagaatgcaa agcacatcca ataaaagagc tggattataa ctctcttct 420
 ttctctgggg gccgtggggg gggagctggg gcgagagggt ccgttgcccc ccgttgcttt 480
 tcctctggga ggg 493

<210> 56
 <211> 5282
 <212> DNA
 <213> Homo sapiens

<400> 56
 tgaagtcaac atgcctgccc caaacaata tgcaaaagggt tcactaaagc agtagaaata 60
 atatgcattg tcagtgatgt tccatgaaac aaagctgcag gctgtttaag aaaaaataac 120
 acacatataa acatcacaca cacagacaga cacacacaca cacaacaatt aacagtcttc 180
 aggcaaaacg tcgaatcagc tatttactgc caaagggaaa tatcatttat tttttacatt 240
 attaagaaaa aaagatttat ttatttaaga cagtcccatc aaaactcctg tctttggaaa 300
 tccgaccact aattgccaag caccgcttcg tgtggctcca cctggatgtt ctgtgcctgt 360
 aaacatagat tcgctttcca tgttggtggc cggatcacca tctgaagagc agacggatgg 420
 aaaaaggacc tgatcattgg ggaagctggc tttctggctg ctggaggctg gggagaagggt 480
 gttcattcac ttgcatttct ttgccctggg ggctgtgata ttaacagagg gagggttcct 540
 gtggggggaa gtccatgcct ccctggcctg aagaagagac tctttgcata tgactcacat 600
 gatgcatacc tgggtgggagg aaaagagttg ggaacttcag atggacctag taccactga 660
 gatctccacg ccgaaggaca gcgatgggaa aaatgccctt aaatcatagg aaagtatttt 720
 ttttaagctac caattgtgcc gagaaaagca ttttagcaat ttatacaata tcatccagta 780
 ccttaagccc tgattgtgta tattcatata ttttggtatc gcacccccca actcccaata 840
 ctggctctgt ctgagtaaga aacagaatcc tctggaactt gaggaagtga acatttcggt 900
 gacttccgca tcaggaaggc tagagttacc cagagcatca ggccgccaca agtgccctgt 960

tttaggagac	cgaagtccgc	agaacctgcc	tgtgtcccag	cttggaggcc	tggctctgga	1020
actgagccgg	ggccctcact	ggcctcctcc	agggatgatc	aacagggcag	tgtggtctcc	1080
gaatgtctgg	aagctgatgg	agctcagaat	tccactgtca	agaaagagca	gtagaggggt	1140
gtggctgggc	ctgtcaccct	ggggccctcc	aggtaggccc	gttttcacgt	ggagcatggg	1200
agccacgacc	cttcttaaga	catgtatcac	tgtagaggga	aggaacagag	gccctggggc	1260
cttcctatca	gaaggacatg	gtgaaggctg	ggaacgtgag	gagaggcaat	ggccacggcc	1320
cattttggct	gtagcacatg	gcacgttggc	tgtgtggcct	tggcccacct	gtgagtttaa	1380
agcaaggctt	taaatgactt	tggagagggt	cacaaatcct	aaaagaagca	ttgaagtgag	1440
gtgtcatgga	ttaattgacc	cctgtctatg	gaattacatg	taaaacatta	tcttgtcact	1500
gtagtttggt	tttatgtgaa	aacctgacaa	aaaaaaagtt	ccagggtgtg	aatatggggg	1560
ttatctgtac	atcctggggc	attaaaaaaa	aatcaatgg	tggggaacta	taaagaagta	1620
acaaaagaag	tgacatcttc	agcaaataaa	ctaggaaatt	tttttttctt	ccagtttaga	1680
atcagccttg	aaacattgat	ggaataactc	tgtggcatta	ttgcattata	taccatttat	1740
ctgtattaac	tttggaatgt	actctgttca	atgtttaatg	ctgtggttga	tatttcgaaa	1800
gctgctttaa	aaaaatacat	gcatctcagc	gtttttttgt	ttttaattgt	atttagttat	1860
ggcctataca	ctatttgtga	gcaaagggtga	tcgttttctg	tttgagattt	ttatctcttg	1920
attcttcaaa	agcattctga	gaagggtgaga	taagccctga	gtctcagcta	cctaagaaaa	1980
acctggatgt	cactggccac	tgaggagctt	tgtttcaacc	aagtcatgtg	catttccacg	2040
tcaacagaat	tgtttattgt	gacagttata	tctgttgtcc	ctttgacctt	gtttcttgaa	2100
ggtttcctcg	tccctgggca	attccgcatt	taattcatgg	tattcaggat	tacatgcatg	2160
tttggttaaa	cccatgagat	tcattcagtt	aaaaatccag	atggcaaagt	accagcagat	2220
tcaaactctat	ggtggtttga	cctttagaga	gttgctttac	gtggcctgtt	tcaacacaga	2280
cccaccaga	gccctcctgc	cctccttcog	cgggggcttt	ctcatggctg	tccttcaggg	2340
tcttcctgaa	atgcagtgg	gcttacgctc	caccaagaaa	gcaggaaacc	tgtggtatga	2400
agccagacct	ccccggcggg	cctcagggaa	cagaatgatc	agacctttga	atgattctaa	2460
tttttaagca	aaatattatt	ttatgaaagg	tttacattgt	caaagtgatg	aatatggaat	2520
atccaatcct	gtgctgctat	cctgccaaaa	tcattttaat	ggagtcagtt	tgcagtatgc	2580
tccacgtgg	aagatcctcc	aagctgcttt	agaagtaaca	atgaagaacg	tggacgcttt	2640
taatataaag	cctgttttgt	cttctgttgt	tgttcaaacg	ggattcacag	agtatttgaa	2700
aatgtatat	atattaagag	gtcacggggg	ctaattgctg	gctggctgcc	ttttgctgtg	2760
gggttttggt	acctggtttt	aataacagta	aatgtgcca	gcctcttggc	cccagaactg	2820

tacagtattg	tggctgcact	tgctctaaga	gtagttgatg	ttgcattttc	cttattgtta	2880
aaaacatggt	agaagcaatg	aatgtatata	aaagcctcaa	ctagtcattt	ttttctcctc	2940
ttcttttttt	tcattatatc	taattatttt	gcagttgggc	aacagagaac	catccctatt	3000
ttgtattgaa	gagggattca	catctgcac	ttaactgctc	tttatgaatg	aaaaaacagt	3060
cctctgtatg	tactcctctt	tacactggcc	agggtcagag	ttaaataagag	tatatgcact	3120
ttccaaattg	gggacaaggg	ctctaaaaaa	agcccaaaaa	ggagaagaac	atctgagaac	3180
ctcctcggcc	ctcccagtc	ctcgctgcac	aaataactccg	caagagaggc	cagaatgaca	3240
gctgacaggg	tctatggcca	tcgggtcgctc	tccgaagatt	tggcaggggc	agaaaactct	3300
ggcaggctta	agatttgga	taaagtcaca	gaatcaagga	agcacctcaa	tttagttcaa	3360
acaagacgcc	aacattctct	ccacagctca	cttacctctc	tgtgttcaga	tgtggccttc	3420
catttatatg	tgatctttgt	tttattagta	aatgcttata	atctaaagat	gtagctctgg	3480
cccagtggga	aaaattagga	agtgattata	aatcgagagg	agttataata	atcaagatta	3540
aatgtaaata	atcagggcaa	tccaacaca	tgtctagctt	tcacctccag	gatctattga	3600
gtgaacagaa	ttgcaaatag	tctctatttg	taattgaact	tatcctaaaa	caaatagttt	3660
ataaatgtga	acttaaactc	taattaattc	caactgtact	tttaaggcag	tggctgtttt	3720
tagactttct	tatcacttat	agttagtaat	gtacacctac	tctatcagag	aaaaacagga	3780
aaggctcgaa	atacaagcca	ttctaaggaa	attagggagt	cagttgaaat	tctattctga	3840
tcttattctg	tgggtgtctt	tgcagcccag	acaaatgtgg	ttacacactt	tttaagaaat	3900
acaattctac	attgtcaagc	ttatgaaggt	tccaatcaga	tctttattgt	tattcaattt	3960
ggatctttca	gggatttttt	ttttaaat	ttatgggaca	aaggacattt	gttggagggg	4020
tgggagggag	gaacaatttt	taaatataaa	acattcccaa	gtttggatca	gggagttgga	4080
agttttcaga	ataaccagaa	ctaagggtat	gaaggacctg	tattggggtc	gatgtgatgc	4140
ctctgcgaag	aaccttgtgt	gacaaatgag	aaacattttg	aagtttgtgg	tacgaccttt	4200
agattccaga	gacatcagca	tggctcaaag	tgagctccg	tttggcagtg	caatgggtata	4260
aatttcaagc	tggatatgtc	taatgggtat	ttaaacaata	aatgtgcagt	tttaactaac	4320
aggatatatta	atgacaacct	tctgggttgg	agggacatct	gtttctaaat	gtttattatg	4380
tacaatacag	aaaaaaattt	tataaaatta	agcaatgtga	aactgaattg	gagagtgata	4440
atacaagtcc	tttagtctta	cccagtgaat	cattctgttc	catgtctttg	gacaaccatg	4500
accttgga	atcatgaaat	atgcatctca	ctggatgcaa	agaaaatcag	atggagcatg	4560
aatgggtactg	taccggttca	tctggactgc	cccagaaaaa	taacttcaag	caaacatcct	4620

atcaacaaca aggttgttct gcataccaag ctgagcacag aagatgggaa cactgggtgga	4680
ggatggaaag gctcgctcaa tcaagaaaat tctgagacta ttaataaata agactgtagt	4740
gtagatactg agtaaatacca tgcacctaaa ccttttggaa aatctgccgt gggccctcca	4800
gatagctcat ttcattaagt tttccctcc aaggtagaat ttgcaagagt gacagtggat	4860
tgcatttctt ttggggaagc tttcttttgg tggttttggt tattatacct tcttaagttt	4920
tcaaccaagg tttgcttttg ttttgagtta ctgggggttat ttttgtttta aataaaaata	4980
agtgtacaat aagtgttttt gtattgaaag cttttgttat caagattttc atacttttac	5040
cttccatggc tctttttaag attgatactt ttaagagggtg gctgatattc tgcaacactg	5100
tacacataaa aaatacggta aggatacttt acatgggttaa ggtaaagtaa gtctccagtt	5160
ggccaccatt agctataatg gcactttggt tgtgttggtg gaaaaagtca cattgccatt	5220
aaactttcct tgtctgtcta gttaatatgt tgaagaaaaa taaagtacag tgtgagatac	5280
tg	5282

<210> 57
 <211> 117
 <212> DNA
 <213> Homo sapiens

<400> 57	
attcggggcg agggaggagg aagaagcgga ggaggcggt cccgctcgca gggccgtgca	60
cctgcccgcc cgcccgtcg ctgctcgcc cgccgcgcc cgctgccgac cgccagc	117

<210> 58
 <211> 430
 <212> DNA
 <213> Homo sapiens

<400> 58	
tgatccaggg agccccacc atccggggggg accccgagtg tcattctctt tacaatgagc	60
agcaggaggc ttgcggggtg cacaccacgc ggatgcagta gaccgcagcc agccggtgcc	120
tggcgcccct gcccccgcc cctctccaaa caccggcaga aaacggagag tgcttgggtg	180
gtgggtgctg gaggattttc cagtctctgac acacgtatct atatttggaa agagaccagc	240
accgagctcg gcacctcccc ggccctctctc tcccagctg cagatgccac acctgctcct	300
tcttgctttc cccgggggag gaaggggggt gtggtcgggg agctggggta caggtttggg	360
gagggggaag agaaattttt atttttgaac ccctgtgtcc cttttgcata agattaaagg	420
aaggaaaagt	430

<210> 59
 <211> 192

<212> DNA
 <213> Homo sapiens

<400> 59
 tectaggcgg cggccgcggc ggccggaggca gcagcggcgg cggcagtggc ggccggcgaag 60
 gtggcggcgg ctcggccagt actcccggcc cccgccattt cggactggga gcgagcgcgg 120
 cgcaggcact gaaggcggcg gcggggccag aggctcagcg gctcccaggt gcgggagaga 180
 ggccctgctga aa 192

<210> 60
 <211> 4172
 <212> DNA
 <213> Homo sapiens

<400> 60
 taaatacaat ttgtactttt ttcttaaggc atactagtagc aagtggtaat ttttgtacat 60
 tacactaaat tattagcatt tgtttttagca ttacctaatt tttttcctgc tccatgcaga 120
 ctgttagctt ttaccttaaa tgcttatattt aaaatgacag tggaagtattt tttttcctcg 180
 aagtgccagt attcccagag ttttggtttt tgaactagca atgcctgtga aaaagaaact 240
 gaatacctaa gatttctgtc ttgggggtttt tgggtgcatgc agttgattac ttcttatattt 300
 tcttaccgaag tgtgaatgtt ggtgtgaaac aaattaatga agcttttgaa tcatccctat 360
 tctgtgtttt atctagtcac ataaatggat taattactaa tttcagttga gaccttctaa 420
 ttgggttttta ctgaaacatt gagggacaca aatttatggg cttcctgatg atgattcttc 480
 taggcatcat gtcctatagt ttgtcatccc tgatgaatgt aaagttacac tgttcacaaa 540
 ggttttgtct cctttccact gctattagtc atggtcactc tccccaaaat attatatattt 600
 ttctataaaa agaaaaaaat ggaaaaaaat tacaaggcaa tggaaactat tataaggcca 660
 tttccttttc acattagata aattactata aagactccta atagcttttt cctgttaagg 720
 cagacccagt atgaatggga ttattatagc aaccattttg gggctatatt tacatgctac 780
 taaattttta taataattga aaagatttta acaagtataa aaaaattctc ataggaatta 840
 aatgtagtct ccctgtgtca gactgctctt tcatagtata actttaaatc ttttcttcaa 900
 cttgagtctt tgaagatagt tttaattctg cttgtgacat taaaagatta tttgggccag 960
 ttatagctta ttaggtgttg aagagaccaa gggtgcaagc caggccctgt gtgaaccttg 1020
 agctttcata gagagtttca cagcatggac tgtgtgcccc acggtcatcc gagtgggtgt 1080
 acgatgcatt ggtagtcaa aaatggggag ggactagggc agtttgata gctcaacaag 1140
 atacaatctc actctgtggt ggtcctgctg acaaatacaag agcattgctt ttgtttctta 1200
 agaaaacaaa ctctttttta aaaattactt ttaaataatta actcaaaagt tgagattttg 1260

gggtggtggt	gtgccaagac	attaatTTTT	TTTTTaaaca	atgaagtga	aaagttttac	1320
aatctctagg	tttggctagt	tctcttaaca	ctggTTaaat	taacattgca	taaacacttt	1380
tcaagtctga	tccatattta	ataatgcttt	aaaataaaaa	taaaaacaat	ccttttgata	1440
aatttaaaat	gttacttatt	ttaaaataaa	tgaagtgaga	tggcatggtg	aggtgaaagt	1500
atcactggac	taggttggtg	gtgacttagg	ttctagatag	gtgtctttta	ggactctgat	1560
tttgaggaca	tcacttacta	tccatttctt	catgttaaaa	gaagtcactc	caaactctta	1620
gttttttttt	tttactactat	gtgatttata	ttccattttac	ataaggatac	acttatttgt	1680
caagctcagc	acaatctgta	aattttttaac	ctatgtttaca	ccatcttcag	tgccagtctt	1740
gggcaaaatt	gtgcaagagg	tgaagtttat	atttgaatat	ccattctcgt	tttaggactc	1800
ttcttccata	ttagtgtcat	cttgccctccc	taccttccac	atgccccatg	acttgatgca	1860
gttttaatac	ttgtaattcc	cctaaccata	agattttactg	ctgctgtgga	tatctccatg	1920
aagttttccc	actgagtcac	atcagaaatg	ccctacactc	tattttcctc	agggctcaag	1980
agaatctgac	agataccata	aagggatttg	acctaatacac	taattttcag	gtggtggctg	2040
atgctttgaa	catctctttg	ctgcccatac	cattagcgac	agtaggattt	ttcaaccctg	2100
gtatgaatag	acagaaccct	atccagtggg	aggagaattt	aataaagata	gtgcagaaag	2160
aattccttag	gtaatctata	actaggacta	ctcctggtaa	cagtaataca	ttccattggt	2220
ttagtaacca	gaaatcttca	tgcaatgaaa	aatactttta	ttcatgaagc	ttactttttt	2280
ttttttggtg	tcagagtctc	gctcttgtea	cccaggctgg	aatgcagtgg	cgccatctca	2340
gctcactgca	accttccatc	ttcccagggt	caagcgattc	tcgtgcctcg	gcctcctgag	2400
tagctgggat	tacaggcgtg	tgacttacac	tcaactaatt	tttgtatttt	taggagagac	2460
ggggtttcac	ctgttggtca	ggctgggtctc	gaactcctga	cctcaagtga	ttcaccacc	2520
ttggcctcat	aaacctgttt	tgcaagaactc	atttattcag	caaataattta	ttgagtgcct	2580
accagatgcc	agtcaccgca	caaggcactg	ggtatatggt	atccccaac	aagagacata	2640
atcccggtcc	ttaggtactg	ctagtgtggt	ctgtaatatc	ttactaaggc	ctttggtata	2700
cgaccagag	ataacacgat	gcgtattttta	gttttgcaaa	gaaggggttt	ggtctctgtg	2760
ccagctctat	aattgttttg	ctacgattcc	actgaaactc	ttcgatcaag	ctactttatg	2820
taaatcactt	cattgtttta	aaggaataaa	cttgattata	ttgttttttt	atttggcata	2880
actgtgattc	ttttaggaca	attactgtac	acattaagggt	gtatgtcaga	tattcatatt	2940
gacccaaatg	tgtaatatcc	cagttttctc	tgcataagta	attaaaaat	acttaaaaat	3000
taatagtttt	atctgggtac	aaataaacag	tgccctgaact	agttcacaga	caagggaac	3060

ttctatgtaa aaatcactat gatttctgaa ttgctatgtg aaactacaga tctttggaac	3120
actgttttagg taggggtgtta agacttgaca cagtacctcg tttctacaca gagaaagaaa	3180
tggccatact tcaggaactg cagtgccttat gaggggatat ttaggcctct tgaatttttg	3240
atgtagatgg gcattttttt aaggtagtgg ttaattacct ttatgtgaac tttgaatgg	3300
ttaacaaaag atttggtttt gtagagattt taaaggggga gaattctaga aataaatgtt	3360
acctaattat tacagcctta aagacaaaaa tccttggtga agttttttta aaaaaagact	3420
aaattacata gacttaggca ttaacatgtt tgtggaagaa tatagcagac gtatattgta	3480
tcatttgagt gaatgttccc aagtaggcat tctaggctct atttaactga gtcacactgc	3540
ataggaattt agaacctaac ttttatagg	3600
ttgtccta atatacatag aaactttgtg gggcatgtta agttacagtt tgcacaagtt	3660
catctcattt gtattccatt gatttttttt tttcttctaa acattttttt ttcaaaacag	3720
tatatataac tttttttagg ggattttttt tagacagcaa aaaactatct gaagatttcc	3780
atttgtcaaa aagtaatgat ttcttgataa ttgtgtagtg aatgtttttt agaaccagc	3840
agttaccttg aaagctgaat ttatatattag taacttctgt gttaatactg gatagcatga	3900
attctgcatt gagaaactga atagctgtca taaaatgctt tctttcctaa agaaagatac	3960
tcacatgagt tcttgaagaa tagtcataac tagattaaga tctgtgtttt agtttaatag	4020
tttgaagtgc ctgtttggga taatgatagg taatttagat gaatttaggg gaaaaaaaaag	4080
ttatctgcag ttatgttgag ggcccatctc tccccccaca cccccacaga gctaactggg	4140
ttacagtgtt ttatccgaaa gtttccaatt cc	4172

<210> 61
 <211> 238
 <212> DNA
 <213> Homo sapiens

<400> 61	
ccattgtgct ggaaaggcgc gcaacggcgg cgacggcggc gaccccaccg cgcacctctgc	60
caggcctccg cgcccagccg ccacgcgcgc ccgcgcgcc gcgccccgac cttttcttcg	120
cgccccgcgc cctcggcccg ccaggccccc ttgcgggcca ccgcccaggc ccgcgcgcgg	180
ccgcgccgccc gccagggacc ggcccgcgcgc ccgcaggccg cccgccgccc gcgcccgc	238

<210> 62
 <211> 547
 <212> DNA
 <213> Homo sapiens

<400> 62

ggccccgcag ctctggccac agggacctct gcagtgcccc ctaagtgacc cggacacttc 60
 cgaggggggcc atcaccgcct gtgtatataa cgtttccggt attactctgc tacacgtagc 120
 ctttttactt ttgggggtttt gtttttgttc tgaactttcc tgttaccttt tcaggggtga 180
 tgtcacatgt aggtggcgtg tatgagtga gacgggcctg ggtcttgggg actggagggc 240
 aggggtcctt ctgcccctgg ggtcccaggg tgctctgcct gctcagccag gcctctcctg 300
 ggagccactc gccagagac tcagcttggc caacttgggg ggctgtgtcc acccagcccg 360
 cccgtcctgt gggctgcaca gctcaccttg ttccctcctg ccccggttcg agagccgagt 420
 ctgtgggcac tctctgcctt catgcacctg tcctttctaa cacgtcgcct tcaactgtaa 480
 tcacaacatc ctgactccgt catttaataa agaaggaaca tcaggcatgc taaaaaaaaa 540
 aaaaaaa 547

<210> 63
 <211> 102
 <212> DNA
 <213> Homo sapiens

<400> 63
 gaattccggc aaacatgagg cagctgccag cgggcctggg cagtcttgtc tgccctcggct 60
 gtgaagtggg gaggctggca acagttttct tcagcgccca gg 102

<210> 64
 <211> 2017
 <212> DNA
 <213> Homo sapiens

<400> 64
 gacacgtcca aaggagtgca tggccacagc cacctccacc cccaagaaac ctccatcctg 60
 ccaggagcag cctccaagaa acttttataa aatagatttg caaaaagtga acagattgct 120
 acacacacac acacacacac acacacacac acacacagcc attcatctgg gctggcagag 180
 gggacagagt tcagggaggg gctgagctctg gctagggggc gagtccagag gcccagcca 240
 gcccttccca ggccagcgag gcgaggctgc ctctgggtga gtggctgaca gagcaggtct 300
 gcaggccacc agctgctgga tgtcaccaag aaggggctcg agtgccctgc aggagggctc 360
 aatcctccgg tcccacctcg tcccgttcat ccattctgct ttcttgccac acagtggccg 420
 gcccaggctc ccctggtctc ctccccgtag ccactctctg ccactacct atgcttctag 480
 aaagcccctc acctcaggac cccagaggac cagctggggg gcagggggga gagggggtaa 540
 tggaggccaa gcctgcagct ttctggaaat tcttccttgg gggccccagt atccccctgt 600
 actccactga cctggaagag ctgggtacca ggccaccac tgtggggcaa gcctgagtgg 660

tgaggggcca	ctggcatcat	tctccctcca	tggcaggaag	gcgggggatt	tcaagtttag	720
ggattgggtc	gtggtggaga	atctgagggc	actctgccag	ctccacaggt	ggatgagcct	780
ctccttgccc	cagtcctggt	tcagtgggaa	tgcagtgggt	ggggctgtac	acaccctcca	840
gcacagactg	ttccctccaa	ggtcctctta	ggccccgggg	aggaacgtgg	ttcagagact	900
ggcagccagg	gagcccgggg	cagagctcag	aggagtctgg	gaaggggctg	gtccctcctc	960
ttcctgtagt	gcccctccca	tggcccagca	gcttggtctga	gcccctctcc	tgaagcagct	1020
gtgcgccgtc	cctctgcctt	gcacaaaaag	cacaagacat	tccttagcag	ctcagcgag	1080
ccctagtggg	agcccagcac	actgcttctc	ggaggccagg	ccctcctgct	ggctgagctt	1140
gggcccgggtg	gcccgaatat	ggtggccctg	gggaagaggc	cttgggggtc	tgctctgtgc	1200
ctgggatcag	tggggcccca	aagcccagcc	cggtgacca	acattcaaaa	gcacaaaccc	1260
tggggactct	gcttggtgtg	cccctccatc	tggggatgga	gaatgcagcc	caaagctgga	1320
gccaatggtg	agggctgaga	gggctgtggc	tgggtggtca	gcagaaaccc	caggaggaga	1380
gagatgctgc	tcccgctga	ttggggcctc	accagaagg	aaccgggtcc	cagccgcatg	1440
gcccctccag	gaacattccc	acataatata	ttccatcaca	gccagcccag	ctccactcag	1500
ggctggccccg	gggagtcccc	gtgtgcccc	agaggctagc	cccagggtga	gcagggccct	1560
cagaggaaaag	gcagtatggc	ggaggccatg	ggggccctc	ggcattcaca	cacagcctgg	1620
cctcccctgc	ggagctgcat	ggacgcctgg	ctccaggctc	caggctgact	ggggcctctg	1680
cctccaggag	ggcatcagct	ttccctgggt	cagggatctt	ctccctcccc	tcaccgctg	1740
cccagccctc	ccagctgatg	tactctgcc	tctaagccaa	ggcctcagga	gagcatcacc	1800
accacaccct	gcggccttgc	cttggggcca	gactggctgc	acagcccaac	caggaggggt	1860
ctgcctccca	cgctgggaca	cagaccggcc	gcatgtctgc	atggcagaag	cgtctccctt	1920
gccacggcct	gggaggggtg	ttcctgttct	cagcatccac	taatattcag	tcctgtatat	1980
tttaataaaa	taaacttgac	aaaggaaaaa	aaaaccg			2017

<210> 65
 <211> 97
 <212> DNA
 <213> Homo sapiens

<400>	65		
gtccaggaac	tcctcagcag	cgctcccttc agctccacag ccagacgccc tcagacagca	60
aagcctaccc	ccgcgcgcgc	ccctgcccgc cgctgcgc	97

<210> 66
 <211> 1474
 <212> DNA

<213> Homo sapiens

<400> 66

```
aagtcta atcatattt tttatttata tgaaccatgt ctattaattt aattatttaa 60
taataatttat attaaactcc ttatgttact taacatcttc tgtaacagaa gtcagtactc 120
ctgttgcgga gaaaggagtc atacttgtga agacttttat gtcactactc taaagatttt 180
gctgttgctg ttaagtttg aaaacagttt ttattctgtt ttataaacca gagagaaatg 240
agttttgacg tctttttact tgaatttcaa cttatattat aaggacgaaa gtaaagatgt 300
ttgaataactt aaacactatc acaagatgcc aaaatgctga aagtttttac actgtcgtatg 360
tttccaatgc atcttccatg atgcattaga agtaactaat gtttgaaatt ttaaagtact 420
tttgggtatt tttctgtcat caaacaaaac aggtatcagt gcattattaa atgaatattt 480
aaattagaca ttaccagtaa tttcatgtct actttttaaa atcagcaatg aaacaataat 540
ttgaaatttc taaattcata gggtagaatc acctgtaaaa gcttgtttga tttcttaaag 600
ttattaaact tgtacatata ccaaaaagaa gctgtcttgg atttaaattc gtaaaatcag 660
atgaaatttt actacaattg cttgttaaaa tattttataa gtgatgttcc ttttcacca 720
agagtataaa cttttttagt gtgactgtta aaacttcctt ttaaatacaa atgccaaatt 780
tattaagggtg gtggagccac tgcagtgtta tctcaaaata agaataatcct gttgagatat 840
tccagaatct gtttatatgg ctggtaacat gtaaaaaccc cataaccccg caaaagggg 900
tcctaccctt gaacataaag caataaccaa aggagaaaag cccaaattat tggttccaaa 960
tttaggggtt aaactttttg aagcaaactt ttttttagcc ttgtgcactg cagacctggt 1020
actcagattt tgctatgagg ttaatgaagt accaagctgt gcttgaataa cgatatgttt 1080
tctcagattt tctgtgttac agtttaattt agcagtccat atcacattgc aaaagtagca 1140
atgacctcat aaaatacctc ttcaaaatgc ttaaattcat ttcacacatt aattttatct 1200
cagtcttgaa gccaatcag taggtgcatt ggaatcaagc ctggctacct gcatgctgtt 1260
ccttttcttt tcttctttta gccattttgc taagagacac agtcttctca aacacttcgt 1320
ttctcctatt ttgttttact agttttaaga tcagagttca ctttctttgg actctgccta 1380
tattttctta cctgaacttt tgcaagtttt caggtaaacc tcagctcagg actgctattt 1440
agctcctctt aagaagatta aaaaaaaaaa aaaa 1474
```

<210> 67

<211> 99

<212> DNA

<213> Homo sapiens

<400> 67

```
gcgccccgcc cccaccctc gcagcacccc gcgccccgcg ccctcccagc cgggtccagc 60
```


cgagagccatg gggccggagc cgcagtgagc accatggag 99

<210> 68
<211> 614
<212> DNA
<213> Homo sapiens

<400> 68
tgaaccagaa ggccaagtcc gcagaagccc tgatgtgtcc tcagggagca gggaaggcct 60
gactttctgct ggcatcaaga ggtgggaggg ccctccgacc acttccaggg gaacctgcca 120
tgccaggaac ctgtcctaag gaaccttctt tcctgcttga gttcccagat ggctggaagg 180
ggtccagcct cgttggaaga ggaacagcac tggggagtct ttgtggattc tgaggccctg 240
cccaatgaga ctctagggtc cagtggatgc cacagcccag cttggccctt tccttccaga 300
tcctgggtac tgaaagcctt agggaaagctg gcctgagagg ggaagcggcc ctaaggagtg 360
gtctaagaac aaaagcgacc cattcagaga ctgtccctga aacctagtac tgccccccat 420
gaggaaggaa cagcaatggg gtcagtatcc aggccttgta cagagtgtt ttctgttttag 480
tttttacttt ttttgttttg tttttttaaa gacgaaataa agaccaggg gagaatgggt 540
gttgatatggg gaggcaagtg tgggggggtcc ttctccacac ccactttgtc catttgcaaa 600
tatattttgg aaaa 614

<210> 69
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer 1 for amplify VEGF 5'UTR

<400> 69
aaagtcgacg taatcgcgga ggcttggggc agccgg 36

<210> 70
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer 2 for amplify VEGF 5'UTR

<400> 70
tttgcgactg gtcagctgcg ggatcccaag 30

<210> 71
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer 3 for amplify VEGF 5'UTR

 <400> 71
 aagtcgacgt aagagctcca gagagaagtc gag 33

 <210> 72
 <211> 33
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer 4 for amplify VEGF 5'UTR

 <400> 72
 aaacccgggc agcaaggcaa ggctccaatg cac 33

 <210> 73
 <211> 39
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer 5 for amplify VEGF 3'UTR

 <400> 73
 gccgggcagg aggaaggagc ctccctcagg gtttcggga 39

 <210> 74
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer 6 for amplify VEGF 3'UTR

 <400> 74

 ctgcactaga gacaaagacg tgatgttaat 30

 <210> 75
 <211> 66
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Polylinker

 <400> 75
 gaacaaatgt cgacgggggc ccctagcaga tctagcgctg gatcccccg ggagctcaug 60

 gaagac 66

 <210> 76
 <211> 30

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer for luciferase amplification

 <400> 76
 cggtgttggg cgcgttatatt atcggagttg 30

 <210> 77
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer for luciferase amplification

 <400> 77
 ttggcgaaga atgaaaatag ggttggtact 30

 <210> 78
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer for GAPDH amplification

 <400> 78
 ggtgaaggtc ggagtcaacg ga 22

 <210> 79
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer for GAPDH amplification

 <400> 79
 gagggatctc gctcctggaa g 21

 <210> 80
 <211> 55
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: 5'UTR forward oligo

 <400> 80
 aaagtcgacg taaccgccag atttgaatcg cgggaccctg tggcagaggt ggcgg 55

 <210> 81

<211> 54
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: 5'UTR reverse oligo

 <400> 81
 aaaggatccg ggcaacgtcg gggcacccat gccgccgccg ccacctctgc caac 54

 <210> 82

 <211> 40
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: 3'UTR forward oligo

 <400> 82
 aaagcgccg cggcctctgc cggagctgcc tgggccaga 40

 <210> 83
 <211> 37
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: 3'UTR reverse oligo

 <400> 83
 aaatctagac tcaggaacag ccgagatgac ctccaga 37

 <210> 84
 <211> 67
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: SL top oligonucleotide

 <400> 84
 ctagaagctt agggccgcg atccgcgcgc ggttcgccgc gcgcggatcc gcggtagcaa 60
 gttagtc 67

 <210> 85
 <211> 68

 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: SL bottom oligonucleotide

 <400> 85

gactaagctt gctaccgcgg atccgcgcgc gccgaaccgc gcgcggatcc gcggccctaa 60
gcttctag 68

<210> 86
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer (Sense/HindIII)

<400> 86
caagaagctt gcgcccggcc cccaccct cg 32

<210> 87
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer (Antisense/NcoI)

<400> 87
agcccatggt gtcactgcg gtcccggccc c 31

<210> 88
<211> 22
<212> DNA
<213> Artificial equence

<220>
<223> Description of Artificial Sequence: PCR primer (Sense/BglII)

<400> 88
agactctgaa ccagaaggcc aa 22

<210> 89
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer (Antisense/KpnI)

<400> 89
ctcggtagca gttttccaaa atatatttgc aaatgg 36

<210> 90
<211> 58
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: sense minus uORF HindIII primer

<400> 90
 cccaagcttc gcgcccggcc cccacccct cgcagcacc cgcgccccgc gccctccc 58

<210> 91
 <211> 61
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Antisense minus uORF NcoI primer

<400> 91
 ggcccatgg ctccggctgg acccggtgg gaccggctg ggagggcgcg ggagggcgcg 60
 g 61

<210> 92
 <211> 7008
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Expression Vector pCMRI

<400> 92
 gacggatcgg gagatctccc gatcccctat ggtgcactct cagtacaatc tgctctgatg 60
 ccgcatagtt aagccagtat ctgctccctg cttgtgtggt ggaggtcgct gagtagtgcg 120
 cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgcatg aagaatctgc 180
 ttagggtttag gcgttttgcg ctgcttcgcg atgtacgggc cagatatacg cgttgacatt 240
 gattattgac tagttattaa tagtaatcaa ttacggggtc attagttcat agcccatata 300
 tggagttccg cgttacataa cttacggtaa atggcccgcc tggctgaccg cccaacgacc 360
 cccgcccatt gacgtcaata atgacgtatg ttcccatagt aacgccaata gggactttcc 420
 attgacgtca atgggtggag tatttacggt aaactgcca cttggcagta catcaagtgt 480
 atcatatgcc aagtacgcc cctattgacg tcaatgacgg taaatggccc gcctggcatt 540
 atgcccagta catgacctta tgggactttc ctacttggca gtacatctac gtattagtca 600
 tcgctattac catggtgatg cggttttggc agtacatcaa tgggcgtgga tagcggtttg 660
 actcacgggg atttccaagt ctccacccca ttgacgtcaa tgggagtttg ttttggcacc 720
 aaaatcaacg ggactttcca aaatgtcgta acaactccgc ccattgacg caaatgggcg 780
 gtaggcgtgt acggtgggag gtctatataa gcagagctct ctggctaact aagctttcgg 840
 cgcgccgagg taccatggga tccgaagacg ccaaaaacat aaagaaaggc ccggcgccat 900
 tctatcctct agaggatgga accgctggag agcaactgca taaggctatg aagagatacg 960
 ccctggttcc tggaacaatt gcttttacag atgcacatat cgaggtgaac atcacgtacg 1020

cggaatactt	cgaaatgtcc	gttcggttgg	cagaagctat	gaaacgatat	gggctgaata	1080
caaatcacag	aatcgtcgtg	tgcagtgaag	actctcttca	attcttttatg	ccggtgttgg	1140
gcgcgttatt	tatcggagtt	gcagttgcgc	ccgcgaacga	catttataat	gaacgtgaat	1200
tgctcaacag	tatgaacatt	tcgcagccta	ccgtagtggt	tgtttccaaa	aaggggttgc	1260
aaaaaatttt	gaacgtgcaa	aaaaaattac	caataatcca	gaaaattatt	atcatggatt	1320
ctaaaacgga	ttaccaggga	tttcagtcga	tgtacacggt	cgtcacatct	catctacctc	1380
ccggttttta	tgaatacgat	tttgtaccag	agtcctttga	tcgtgacaaa	acaattgcac	1440
tgataatgaa	ttcctctgga	tctactgggt	tacctaaggg	tgtggccctt	ccgcatagaa	1500
ctgcctgcgt	cagattctcg	catgccagag	atcctatttt	tggcaatcaa	atcattccgg	1560
atactgcgat	tttaagtgtt	gttccattcc	atcacgggtt	tggaatgttt	actacactcg	1620
gatatttgat	atgtggattt	cgagtcgtct	taatgtatag	atttgaagaa	gagctgtttt	1680
tacgatccct	tcaggattac	aaaattcaaa	gtgcgttgct	agtaccaacc	ctattttcat	1740
tcttcgccaa	aagcactctg	attgacaaat	acgatttatc	taatttacac	gaaattgctt	1800
ctggggggcg	acctctttcg	aaagaagtcg	gggaagcggg	tgcaaaacgc	ttccatcttc	1860
cagggatacg	acaaggatat	gggctcactg	agactacatc	agctattctg	attacacccg	1920
aggggggatg	taaaccgggc	gcggtcggta	aagttgttcc	attttttgaa	gcgaagggtg	1980
tggatctgga	taccgggaaa	acgctgggcg	ttaatcagag	aggcgaatta	tgtgtcagag	2040
gacctatgat	tatgtccggg	tatgtaaaca	atccggaagc	gaccaacgcc	ttgattgaca	2100
aggatggatg	gctacattct	ggagacatag	cttactggga	cgaagacgaa	cacttcttca	2160
tagttgaccg	cttgaagtct	ttaattaaat	acaaaggata	tcaggtggcc	cccgtgaat	2220
tggaatcgat	attgttacia	cacccaacaa	tcttcgacgc	gggcgtggca	ggtcttcccg	2280
acgatgacgc	cggatgaact	cccgcgcgcg	ttgttggttt	ggagcacgga	aagacgatga	2340
cggaaaaaga	gatcgtggat	tacgtcgcca	gtcaagtaac	aaccgcgaaa	aagttgcgcg	2400
gaggagtgtg	gtttgtggac	gaagtaccga	aaggctttac	cggaaaactc	gacgcaagaa	2460
aatcagagaa	gacctcata	aaggccaaga	agggcggaag	gtccaaattg	cgcgcccgct	2520
aactcgagaa	taaaatgagg	aaattgcata	gcattgtctg	agtaggtgtc	attctattct	2580
gggggggtgg	gtggggcagg	acagcaaggg	ggaggattgg	gaagacaata	gcaggcatgc	2640
tggggatgcg	gtgggctcta	tggcttctga	ggcggaagaa	accagctggg	gctctagggg	2700
gtatccccac	gcgccctgta	gcggcgcatt	aagcgcgggc	ggtgtggtgg	ttacgcgcag	2760
cgtgaccgct	acacttgcca	gcgccctagc	gcccgcctct	ttcgctttct	tcccttcctt	2820

tctcgccacg	ttcgccggct	ttccccgtca	agctctaaat	cgggggctcc	ctttagggtt	2880
ccgatttagt	gctttacggc	acctcgaccc	caaaaaactt	gattagggtg	atgggttcacg	2940
tagtgggcca	tcgccctgat	agacggtttt	tcgccctttg	acgttggagt	ccacgttctt	3000
taatagtgga	ctcttggttc	aaactggaac	aacactcaac	cctatctcgg	tctattcttt	3060
tgatttataa	gggattttgc	cgatttcggc	ctattggtta	aaaaatgagc	tgatttaaca	3120
aaaatttaac	gcgaattaat	tctgtggaat	gtgtgtcagt	taggggtgtg	aaagtcccca	3180
ggctccccag	caggcagaag	tatgcaaagc	atgcatctca	attagtcagc	aaccagggtg	3240
ggaaagtccc	caggctcccc	agcaggcaga	agtatgcaaa	gcatgcatct	caattagtca	3300
gcaaccatag	tcccgcccct	aactccgccc	atcccgcccc	taactccgcc	cagttccgcc	3360
cattctccgc	cccatggctg	actaattttt	tttatttatg	cagaggccga	ggccgcctct	3420
gcctctgagc	tattccagaa	gtagtgagga	ggcttttttg	gaggcctagg	cttttgcaaa	3480
aagctcccgg	gagcttgat	atccattttc	ggatctgac	agcacgtgat	gaaaaagcct	3540
gaactcaccg	cgacgtctgt	cgagaagttt	ctgatcgaaa	agttcgacag	cgtctccgac	3600
ctgatgcagc	tctcgagggg	cgaagaatct	cgtgctttca	gcttcgatgt	aggagggcgt	3660
ggatatgtcc	tgcgggtaaa	tagctgcgcc	gatggtttct	acaaagatcg	ttatgtttat	3720
cggcactttg	catcggccgc	gctcccgatt	cgggaagtgc	ttgacattgg	ggaattcagc	3780
gagagcctga	cctattgcat	ctcccgccgt	gcacagggtg	tcacgttgca	agacctgcct	3840
gaaaccgaac	tgcccgtctgt	tctgcagccg	gtcgcggagg	ccatggatgc	gatcgctgcg	3900
gccgatctta	gccagacgag	cgggttcggc	ccattcggac	cgcaaggaat	cgggtcaatac	3960
actacatggc	gtgatttcat	atgcgcgatt	gctgatcccc	atgtgtatca	ctggcaaact	4020
gtgatggacg	acaccgtcag	tgcgctccgtc	gcgcaggctc	tcgatgagct	gatgctttgg	4080
gccgaggact	gccccgaagt	ccggcacctc	gtgcacgcgg	atttcggctc	caacaatgtc	4140
ctgacggaca	atggccgcat	aacagcggtc	attgactgga	gcgaggcgat	gttcggggat	4200
tcccaatacg	aggtcgccaa	catcttcttc	tggaggccgt	ggttggttg	tatggagcag	4260
cagacgcgct	acttcgagcg	gaggcatccg	gagcttgacg	gatcgccgcg	gctccgggcg	4320
tatatgctcc	gcattggtct	tgaccaactc	tatcagagct	tggttgacgg	caatttcgat	4380
gatgcagctt	gggcgcaggg	tcgatgcgac	gcaatcgctc	gatccggagc	cgggactgtc	4440
gggcgtacac	aaatcgcccc	cagaagcgcg	gccgtctgga	ccgatggctg	tgtagaagta	4500
ctcgccgata	gtggaaaccg	acgccccagc	actcgctccg	gggcaaagga	atagcacgtg	4560
ctacgagatt	tcgattccac	cgccgccttc	tatgaaaggt	tgggcttcgg	aatcgttttc	4620
cgggacgccg	gctggatgat	cctccagcgc	ggggatctca	tgctggagtt	cttcgcccac	4680

cccaacttgt ttattgcagc ttataatggt tacaataaaa gcaatagcat caciaatttc	4740
acaaataaag catttttttc actgcattct agttgtgggt tgtccaaact catcaatgta	4800
tcttatcatg tctgtatacc gtcgacctct agctagagct tggcgtaatc atgggtcatag	4860
ctgttttctg tgtgaaattg ttatccgctc acaattccac acaacatacg agccggaagc	4920
ataaagtgtg aagcctgggg tgcctaataga gtgagctaac tcacattaat tgcgttgcg	4980
tcactgcccg ctttccagtc gggaaacctg tcgtgccagc tgcattaatg aatcggccaa	5040
cgcgcgggga gaggcggttt gcgtattggg cgtctttccg cttcctcgct cactgactcg	5100
ctgcgctcgg tcgttcggct gcggcgagcg gtatcagctc actcaaaggc ggtaatacgg	5160
ttatccacag aatcagggga taacgcagga aagaacatgt gagcaaaagg ccagcaaaag	5220
gccaggaacc gtaaaaaggc cgcgttgctg gcgtttttcc ataggctccg ccccccgtac	5280
gagcatcaca aaaatcgacg ctcaagtcag aggtggcgaa acccgacagg actataaaga	5340
taccaggcgt tccccctgg aagctccctc gtgcgctctc ctgttccgac cctgccgctt	5400
accggatacc tgtccgcctt tctcccttcg ggaagcgtgg cgctttctca tagctcacgc	5460
tgtaggtatc tcagttcggg taggtcgtt cgctccaagc tgggctgtgt gcacgaaccc	5520
cccgttcagc ccgaccgctg cgccttatcc ggtaactatc gtcttgagtc caaccggta	5580
agacacgact tatcgccact ggcagcagcc actggtaaca ggattagcag agcgaggat	5640
gtaggcggtg ctacagagtt cttgaagtgg tggcctaact acggctacac tagaagaaca	5700
gtatttggtg tctgcgctct gctgaagcca gttacctcg gaaaaagagt tggtagctct	5760
tgatccggca aacaaaccac cgctggtagc ggtttttttg tttgcaagca gcagattacg	5820
cgcgaaaaaa aaggatctca agaagatcct ttgatctttt ctacggggtc tgacgctcag	5880
tggaacgaaa actcacgtta agggattttg gtcattgagat tatcaaaaag gatcttcacc	5940
tagatccttt taaattaaaa atgaagtttt aaatcaatct aaagtatata tgagtaaact	6000
tgggtctgaca gttaccaatg cttaatcagt gaggcaccta tctcagcgat ctgtctattt	6060
cgttcatcca tagttgctg actccccgtc gtgtagataa ctacgatacg ggagggctta	6120
ccatctggcc ccagtgtgc aatgataccg cgagaccac gctcaccggc tccagattta	6180
tcagcaataa accagccagc cggaagggcc gagcgcagaa gtggtcctgc aactttatcc	6240
gcctccatcc agtctattaa ttgttgccgg gaagctagag taagtagttc gccagttaat	6300
agtttgcgca acgttggtgc cattgctaca ggcatcgtgg tgtcacgctc gtcgtttggt	6360
atggcttcat tcagctccgg ttcccaacga tcaaggcgag ttacatgatc ccccatgttg	6420
tgcaaaaaag cggttagctc cttcggctct ccgatcgttg tcagaagtaa gttggccgca	6480

gtgttatcac	tcatggttat	ggcagcactg	cataattctc	ttactgtcat	gccatccgta	6540
agatgctttt	ctgtgactgg	tgagtactca	accaagtcac	tctgagaata	gtgtatgcgg	6600
cgaccgagtt	gctcttgccc	ggcgtcaata	cgggataata	ccgcgccaca	tagcagaact	6660
ttaaaagtgc	tcatcattgg	aaaacgttct	tccggggcgaa	aactctcaag	gatcttaccg	6720
ctgttgagat	ccagttcgat	gtaacccact	cgtgcaccca	actgatcttc	agcatctttt	6780
actttcacca	gcgtttctgg	gtgagcaaaa	acaggaaggc	aaaatgccgc	aaaaaaggga	6840
ataagggcga	cacggaaatg	ttgaatactc	atactcttcc	tttttcaata	ttattgaagc	6900
atztatcagg	gttattgtct	catgagcgga	tacatatattg	aatgtattta	gaaaaataaa	6960
caaatagggg	ttccgcgcac	atttccccga	aaagtgccac	ctgacgtc		7008

<210> 93

<211> 11693

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Expression Vector pCMR2

<400> 93

gttgacattg	attattgact	agttattaat	agtaatcaat	tacgggggtca	ttagttcata	60
gccccatata	ggagttccgc	gttacataac	ttacggtaaa	tggcccgccct	ggctgaccgc	120
ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	tcccatagta	acgccaatag	180
ggactttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac	ttggcagtac	240
atcaagtgtg	tcatatgcca	agtcgcggcc	ctattgacgt	caatgacggg	aaatggcccg	300
cctggcatta	tgcccagtac	atgaccttac	gggactttcc	tacttggcag	tacatctacg	360
tattagtcac	cgctattacc	atgggtgatg	gggttttgga	gtacaccaat	gggcgtggat	420
agcggtttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat	gggagtttgt	480
tttggcacca	aatcaacgg	gactttccaa	aatgtcgtaa	taaccccgcc	ccgttgacgc	540
aaatgggcgg	taggcgtgta	cgggtggagg	tctatataag	cagagctcgt	ttagtgaacc	600
gtaagctttc	ggcgcgccac	ggtaccatgg	gatccgaaga	cgccaaaaac	ataaagaaag	660
gccccggcgc	attctatcct	ctagaggatg	gaaccgctgg	agagcaactg	cataaggcta	720
tgaagagata	cgccctggtt	cctggaacaa	ttgcttttac	agatgcacac	atcgaggtga	780
acatcacgta	cgcggaatac	ttcgaaatgt	ccgttcgggt	ggcagaagct	atgaaacgat	840
atgggctgaa	tacaaatcac	agaatcgctg	tatgcagtga	aaactctctt	caattcttta	900
tgccgggtgt	gggcgcgtta	tttatcgagg	ttgcagttgc	gcccgcgaac	gacatttata	960
atgaacgtga	attgctcaac	agtatgaaca	tttcgcagcc	taccgtagtg	tttgtttcca	1020

aaaagggggtt	gcaaaaaaatt	ttgaacgtgc	aaaaaaaatt	accaataatc	cagaaaatta	1080
ttatcatgga	ttctaaaacg	gattaccagg	gatttcagtc	gatgtacacg	ttcgtcacat	1140
ctcatctacc	tcccggtttt	aatgaatacg	attttgtacc	agagtccttt	gatcgtgaca	1200
aaacaattgc	actgataatg	aattcctctg	gatctactgg	gttacctaag	ggtgtggccc	1260
ttccgcatag	aactgcctgc	gtcagattct	cgcattgccag	agatcctatt	tttggcaatc	1320
aatcattcc	ggatactgcg	attttaagtg	ttgttccatt	ccatcacggg	tttggaatgt	1380
ttactacact	cggatatattg	atatgtggat	ttcgagtcgt	cttaatgtat	agatttgaag	1440
aagagctggt	tttacgatcc	cttcaggatt	acaaaattca	aagtgcgttg	ctagtaccaa	1500
ccctattttc	attcttcgcc	aaaagcactc	tgattgacaa	atacgattta	tctaatttac	1560
acgaaattgc	ttctgggggc	gcacctcttt	cgaagaagt	cggggaagcg	gttgcaaac	1620
gcttccatct	tccagggata	cgacaaggat	atgggctcac	tgagactaca	tcagctattc	1680
tgattacacc	cgagggggat	gataaacccg	gcgcggtcgg	taaagttgtt	ccattttttg	1740
aagcgaagg	tgtggatctg	gataccggga	aaacgctggg	cgttaatcag	agaggcgaat	1800
tatgtgtcag	aggacctatg	attatgtccg	gttatgtaaa	caatccggaa	gcgaccaacg	1860
ccttgattga	caaggatgga	tggctacatt	ctggagacat	agcttactgg	gacgaagacg	1920
aacacttctt	catagttgac	cgcttgaagt	ctttaattaa	atacaaagga	tatcaggtgg	1980
cccccgctga	attggaatcg	atattgttac	aacaccccaa	catcttcgac	gcgggcgtgg	2040
caggtcttcc	cgacgatgac	gccggtgaac	ttcccgccgc	cgttgttggt	ttggagcacg	2100
gaaagacgat	gacggaaaaa	gagatcgtgg	attacgtcgc	cagtcaagta	acaaccgcga	2160
aaaagttgcg	cggaggagtt	gtgtttgtgg	acgaagtacc	gaaaggtctt	accggaaaac	2220
tcgacgcaag	aaaaatcaga	gagatcctca	taaaggccaa	gaagggcgga	aagtccaaat	2280
tgcgcggccg	ctaactcgag	aataaacaag	ttaacaacaa	caattgcatt	cattttatgt	2340
ttcaggttca	gggggaggtg	tgggaggttt	tttaaagcaa	gtaaaacctc	tacaaatgtg	2400
gtatggctga	ttatgatccg	gctgcctcgc	gcgtttcggg	gatgacgggtg	aaaacctctg	2460
acacatgcag	ctcccgga	cggtcacagc	ttgtctgtaa	gcggatgccg	ggagcagaca	2520
agcccgtcag	gcgtcagcgg	gtgttgccgg	gtgtcggggc	gcagccatga	ggtcgactct	2580
agaggatcga	tgccccgcc	cggacgaact	aaacctgact	acgacatctc	tgccccctct	2640
tcgcggggca	gtgcatgtaa	tcccttcagt	tggttggtac	aacttgccaa	ctgggccctg	2700
ttccacatgt	gacacggggg	gggaccaaac	acaaaggggt	tctctgactg	tagttgacat	2760
ccttataaat	ggatgtgcac	atttgccaac	actgagtggc	tttcatcctg	gagcagactt	2820

tgcagtctgt	ggactgcaac	acaacattgc	ctttatgtgt	aactcttggc	tgaagctctt	2880
acaccaatgc	tgggggacat	gtacctccca	ggggcccagg	aagactacgg	gaggctacac	2940
caacgtcaat	cagaggggcc	tgtgtagcta	ccgataagcg	gaccctcaag	agggcattag	3000
caatagtgtt	tataaggccc	ccttgttaac	cctaaacggg	tagcatatgc	ttcccgggta	3060
gtagtatata	ctatccagac	taacccta	tcaatagcat	atgttaccca	acgggaagca	3120
tatgctatcg	aattaggggt	agtaaaagg	tcctaaggaa	cagcgatata	tcccacccca	3180
tgagctgtca	cggttttatt	tacatgggg	caggattcca	cgagggtagt	gaaccatttt	3240
agtcacaagg	gcagtggctg	aagatcaagg	agcgggcagt	gaactctcct	gaatcttcgc	3300
ctgcttcttc	attctccttc	gtttagctaa	tagaataact	gctgagttgt	gaacagtaag	3360
gtgtatgtga	ggtgctcgaa	aacaaggttt	caggtgacgc	ccccagaata	aaatttggac	3420
gggggggttca	gtggtggcat	tgtgctatga	caccaatata	accctcacia	acccttggg	3480
caataaatac	tagtgtagga	atgaaacatt	ctgaatatct	ttaacaatag	aatccatgg	3540
ggtggggaca	agccgtaaag	actggatgtc	catctcacac	gaatttatgg	ctatgggcaa	3600
cacataatcc	tagtgcaata	tgatactggg	gttattaaga	tgtgtcccag	gcagggacca	3660
agacaggtga	accatgttgt	tacactctat	ttgtaacaag	gggaaagaga	gtggacgccg	3720
acagcagcgg	actccactgg	ttgtctctaa	cacccccgaa	aattaaacgg	ggctccacgc	3780
caatggggcc	cataaacaaa	gacaagtggc	cactcttttt	tttgaaattg	tggagtgggg	3840
gcacgcgtca	gccccacac	gccgcctgc	ggttttggac	tgtaaaataa	gggtgtaata	3900
acttggctga	ttgtaacccc	gctaaccact	gcggtcaaac	cacttgccca	caaaaccact	3960
aatggcaccc	cggggaatac	ctgcataagt	aggtgggcgg	gccaaagatag	gggcgcgatt	4020
gctgcgatct	ggaggacaaa	ttacacacac	ttgcgcctga	gcgccaagca	cagggttgtt	4080
ggtcctcata	ttcacgaggt	cgctgagagc	acggtgggct	aatgttgcca	tgggtagcat	4140
atactacca	aatatctgga	tagcatatgc	tatcctaata	tatatctggg	tagcataggc	4200
tatcctaata	tatatctggg	tagcatatgc	tatcctaata	tatatctggg	tagtatatgc	4260
tatcctaatt	tatatctggg	tagcataggc	tatcctaata	tatatctggg	tagcatatgc	4320
tatcctaata	tatatctggg	tagtatatgc	tatcctaata	tgtatccggg	tagcatatgc	4380
tatcctaata	gagattagg	tagtatatgc	tatcctaatt	tatatctggg	tagcatatac	4440
tacccaaata	tctggatagc	atatgctatc	ctaatactata	tctgggtagc	atatgctatc	4500
ctaatactata	tctgggtagc	ataggctatc	ctaatactata	tctgggtagc	atatgctatc	4560
ctaatactata	tctgggtagt	atatgctatc	ctaatttata	tctgggtagc	ataggctatc	4620

ctaactctata	tctgggtagc	atatgctatc	ctaactctata	tctgggtagt	atatgctatc	4680
ctaactctgta	tccgggtagc	atatgctatc	ctcatgcata	tacagtcagc	atatgatacc	4740
cagtagtaga	gtgggagtg	tatcctttgc	atatgccgcc	acctcccaag	ggggcgtaga	4800
ttttcgctgc	ttgtcctttt	cctgctgggt	gtcccatc	ttaggtgaat	ttaaggaggc	4860
caggctaaa	ccgtcgc	tctgattgct	caccaggtaa	atgtcgctaa	tgttttccaa	4920
cgcgagaagg	tgttgagcgc	ggagctgagt	gacgtgacaa	catgggtatg	ccaattgcc	4980
ccatgttggg	aggacgaaaa	tggtgacaag	acagatggcc	agaaatacac	caacagcacg	5040
catgatgtct	actggggatt	tattctttag	tgcgggggaa	tacacggctt	ttaatacgat	5100
tgagggcgtc	tcctaacaag	ttacatcact	cctgcccttc	ctcaccctca	tctccatcac	5160
ctccttcac	tccgtcatct	ccgtcatcac	cctccgcggc	agccccttcc	accatagggtg	5220
gaaaccagg	aggcaaact	actccatcgt	caaagctgca	cacagtcacc	ctgatattgc	5280
aggtaggagc	gggctttgtc	ataacaaggt	ccttaatcgc	atccttcaaa	acctcagcaa	5340
atatatgagt	ttgtaaaaag	accatgaaat	aacagacaat	ggactccctt	agcgggccag	5400
gttgtgggcc	gggtccagg	gccattccaa	aggggagacg	actcaatggt	gtaagacgac	5460
attgtggaat	agcaagggca	gttcctcgcc	ttaggttgta	aagggaggtc	ttactacctc	5520
catatacgaa	cacaccggcg	acccaagttc	cttcgtcggt	agtcctttct	acgtgactcc	5580
tagccaggag	agctcttaaa	ccttctgcaa	tgttctcaaa	tttcggggtg	gaacctcctt	5640
gaccacgatg	cttttccaaa	ccacctcct	tttttgcgcc	ctgcctccat	cacctgacc	5700
ccgggggtcca	gtgcttgggc	cttctcctgg	gtcatctgcg	gggccctgct	ctatcgctcc	5760
cggggggcacg	tcaggctcac	catctgggcc	accttcttgg	tggtattcaa	aataatcggc	5820
ttcccctaca	gggtggaaaa	atggccttct	acctggagg	ggcctgcgcg	gtggagaccc	5880
ggatgatgat	gactgactac	tgggactcct	gggcctcttt	tctccacgtc	cacgacctct	5940
ccccctggct	ctttcacgac	ttccccct	ggctctttca	cgctccttac	cccggcggcc	6000
tccactacct	cctcgacccc	ggcctccact	acctcctcga	ccccggcctc	cactgcctcc	6060
tcgaccccg	cctccacctc	ctgctcctgc	cctcctgct	cctgcccctc	ctcctgctcc	6120
tgccccctcct	gccccctcctg	ctcctgcccc	tctgccccct	cctgctcctg	ccccctcctgc	6180
cctcctgct	cctgcccctc	ctgccccctc	tctgctcct	gccccctcctg	ccccctcctcc	6240
tgtcctgccc	cctcctgccc	ctcctgctcc	tgccccctcct	gccccctcctg	ctcctgcccc	6300
tctgccccct	cctgctcctg	ccccctcctgc	tctgccccct	cctgctcctg	ccccctcctgc	6360
tctgccccct	cctgcccctc	ctgccccctc	tctgctcct	gccccctcctg	ctcctgcccc	6420
tctgccccct	cctgcccctc	ctgctcctgc	cctcctcct	gtcctgccc	ctcctgcccc	6480

tcttgcctcct	cctcctgctc	ctgccccctcc	tgccccctcct	cctgctcctg	cccctcctcc	6540
tgctcctgcc	cctcctgccc	ctcctgcccc	tctcctgct	cctgccccctc	ctgccccctcc	6600
tcttgcctcct	gccccctcctc	ctgctcctgc	ccctcctgcc	cctcctgccc	ctcctcctgc	6660
tcttgcctcct	cctcctgctc	ctgccccctcc	tgccccctcct	gccccctcctg	cccctcctcc	6720
tgctcctgcc	cctcctcctg	ctcctgcccc	tcttgcctcct	gccccctccc	ctcctgctcc	6780
tgctcctggt	ccaccgtggg	tccctttgca	gccaatgcaa	cttggtgacgt	tttgggggtct	6840
ccggacacca	tctctatgtc	ttggccctga	tcttgagccg	cccgggggtc	ctggtcttcc	6900
gcctcctcgt	cctcgtcctc	ttccccgtcc	tgtccatgg	ttatcacccc	ctcttctttg	6960
aggtccactg	ccgccggagc	cttctgggtcc	agatgtgtct	cccttctctc	ctaggccatt	7020
tccaggtcct	gtacctggcc	cctcgtcaga	catgattcac	actaaaagag	atcaatagac	7080
atctttatta	gacgacgtc	agtgaataca	gggagtgcag	actcctgccc	cctccaacag	7140
cccccccacc	ctcatcccct	tcatggctgc	tgctcagacag	atccaggtct	gaaaattccc	7200
catcctccga	accatcctcg	tcctcatcac	caattactcg	cagcccggaa	aactcccgt	7260
gaacatcctc	aagatttgcg	tcttgagcct	caagccaggc	ctcaaattcc	tcgtccccct	7320
ttttgctgga	cggtagggat	ggggattctc	gggacccctc	ctcttctctc	tcaaggctac	7380
cagacagaga	tgctactggg	gcaacggaag	aaaagctggg	tgcggcctgt	gaggatcagc	7440
ttatcgatga	taagctgtca	aacatgagaa	ttcttgaaga	cgaaagggcc	tcgtgatacg	7500
cctattttta	taggttaatg	tcattgataat	aatggtttct	tagacgtcag	gtggcacttt	7560
tcgggggaaat	gtgcgcggaa	cccctatttg	tttatttttc	taaatacatt	caaatatgta	7620
tccgctcatg	agacaataac	cctgataaat	gcttcaataa	tattgaaaaa	ggaagagtat	7680
gagtattcaa	catttcctg	tcgccccttat	tccctttttt	gcggcatttt	gccttctcgt	7740
ttttgctcac	ccagaaacgc	tggtgaaagt	aaaagatgct	gaagatcagt	tggtgtcacg	7800
agtgggttac	atcgaactgg	atctcaacag	cggtaagatc	cttgagagtt	ttcgccccga	7860
agaacgtttt	ccaatgatga	gcacttttaa	agttctgcta	tgtggcgcg	tattatccc	7920
tggtgacgcc	gggcaagagc	aactcgggtcg	ccgcatacac	tattctcaga	atgacttgg	7980
tgagtactca	ccagtcacag	aaaagcatct	tacggatggc	atgacagtaa	gagaattatg	8040
cagtgtgcc	ataaccatga	gtgataaac	tgcgccaac	ttacttctga	caacgatcgg	8100
aggaccgaag	gagctaaccg	cttttttgca	caacatgggg	gatcatgtaa	ctcgccctga	8160
tcgttgggaa	ccggagctga	atgaagccat	accaaagcag	gagcgtgaca	ccacgatgcc	8220
tgacgcaatg	gcaacaacgt	tgcgcaaaact	attaactggc	gaactactta	ctctagcttc	8280

ccggcaacaa ttaatagact ggatggaggc ggataaagtt gcaggaccac ttctgcgctc	8340
ggcccttccg gctggctggt ttattgctga taaatctgga gccggtgagc gtgggtctcg	8400
cggatatcatt gcagcactgg gccagatgg taagccctcc cgtatcgtag ttatctacac	8460
gacgggggagt caggcaacta tggatgaacg aaatagacag atcgctgaga taggtgcctc	8520
actgattaag cattggtaac tgtcagacca agtttactca tatatacttt agattgattt	8580
aaaacttcat ttttaattta aaaggatcta ggtgaagatc ctttttgata atctcatgac	8640
caaaatccct taacgtgagt ttctgttcca ctgagcgtca gaccccgtag aaaagatcaa	8700
aggatcttct tgagatcctt tttttctgcg cgtaatctgc tgcttgcaaa caaaaaaacc	8760
accgctacca gcggtggttt gtttgccgga tcaagagcta ccaactcttt ttccgaaggt	8820
aactggcttc agcagagcgc agataccaaa tactgtcctt ctagtgtagc cgtagttagg	8880
ccaccacttc aagaactctg tagcacgcgc tacatacctc gctctgctaa tcctgttacc	8940
agtggctgct gccagtggtg ataagtcgtg tcttaccggg ttggactcaa gacgatagtt	9000
accggataag gcgcagcggc cgggctgaac ggggggttcg tgcacacagc ccagcttgga	9060
gcgaacgacc tacaccgaac tgagatacct acagcgtgag ctatgagaaa gcgccacgct	9120
tcccgaaggg agaaaggcgg acaggatatcc ggtaagcggc agggctcgga caggagagcg	9180
cacgagggag cttccagggg gaaacgcctg gtatctttat agtcctgtcg ggtttcgcca	9240
cctctgactt gagcgtcgat ttttgtgatg ctcgtcaggg gggcggagcc tatggaaaaa	9300
cgccagcaac gcggcctttt tacggttctt ggcccttttg tggccttgaa gctgtcctg	9360
atggtcgtca tctacctgcc tggacagcat ggccctgcaac gcgggcatcc cgatgccgcc	9420
ggaagcgaga agaatacataa tggggaaggc catccagcct cgcgtcgca acgccagcaa	9480
gacgtagccc agcgcgtcgg ccccgagatg cgccgcgtgc ggctgctgga gatggcggac	9540
gcgatggata tgttctgcca agggttggtt tgcgcattca cagttctccg caagaattga	9600
ttggctcaa ttcttgaggt ggtgaatccg ttagcgaggt gccgccctgc ttcacccccg	9660
tggcccgttg ctgcggtttg ctggcggtgt ccccggaaga aatatatttg catgtcttta	9720
gttctatgat gacacaaacc ccgccagcg tcttgtcatt ggcgaattcg aacacgcaga	9780
tgcagtcggg gcggcgcggt ccgaggtcca cttcgcatat taaggtgacg cgtgtggcct	9840
cgaacaccga gcgacctgc agcgacctgc ttaacagcgt caacagcgtg ccgcagatcc	9900
cggggggcaa tgagatatga aaaagcctga actcaccgcy acgtctgtcg agaagtttct	9960
gatcgaaaag ttcgacagcg tctccgacct gatgcagctc tcggagggcg aagaatctcg	10020
tgctttcagc ttcgatgtag gagggcgtgg atatgtcctg cgggtaaata gctgcgccga	10080

tggtttctac	aaagatcgtt	atgtttatcg	gcactttgca	tcggccgcgc	tcccgattcc	10140
ggaagtgcct	gacattgggg	aattcagcga	gagcctgacc	tattgcatct	cccgcctgac	10200
acaggggtgc	acgttgcaag	acctgcctga	aaccgaactg	cccgtgttc	tgcagccggt	10260
cgcggaggcc	atggatgcga	tcgctgcggc	cgatcttagc	cagacgagcg	ggttcggccc	10320
attcggaccg	caaggaatcg	gtcaatacac	tacatggcgt	gatttcatat	gcgcgattgc	10380
tgatcccat	gtgtatcact	ggcaaactgt	gatggacgac	accgtcagtg	cgtccgtcgc	10440
gcaggctctc	gatgagctga	tgctttgggc	cgaggactgc	cccgaagtcc	ggcacctcgt	10500
gcacgcggat	ttcggctcca	acaatgtcct	gacggacaat	ggccgcataa	cagcgggtcat	10560
tgactggagc	gaggcgatgt	tcggggatcc	ccaatacgag	gtcgccaaca	tcttcttctg	10620
gaggccgtgg	ttggcttgta	tggagcagca	gacgcgctac	ttcgagcgga	ggcatccgga	10680
gcttgacagga	tcgccgcggc	tccgggcgta	tatgctccgc	attggtcttg	accaactcta	10740
tcagagcttg	gttgacggca	atttcgatga	tgcagcttgg	gcgcagggtc	gatgcgacgc	10800
aatcgctccga	tccggagccg	ggactgtcgg	gcgtacacaa	atcgcccgcga	gaagcgcggc	10860
cgtctggacc	gatggctgtg	tagaagtact	cgccgatagt	ggaaaccgac	gccccagcac	10920
tcgtccggat	cgggagatgg	gggaggctaa	ctgaaacacg	gaaggagaca	ataccggaag	10980
gaacccgcgc	tatgacggca	ataaaaagac	agaataaaac	gcacgggtgt	tgggtcgttt	11040
gttcataaac	gcgggggttc	gtcccagggc	tggcactctg	tcgatacccc	accgagaccc	11100
cattggggcc	aatacgcccg	cgtttcttcc	ttttccccac	cccaccccc	aagttcgggt	11160
gaaggccccag	ggctcgcagc	caacgtcggg	gcggcaggcc	ctgccatagc	cactggcccc	11220
gtgggttagg	gacgggggtcc	cccatgggga	atggtttatg	gttcgtgggg	gttattattt	11280
gggcgttgcg	tggggtcagg	tccacgactg	gactgagcag	acagacccat	ggtttttgga	11340
tggcctgggc	atggaccgca	tgtactggcg	cgacacgaac	accgggcgtc	tgtggctgcc	11400
aaacaccccc	gacccccaaa	aaccaccgcg	cggatttctg	gcgtgccaag	ctagtcgacc	11460
aattctcatg	tttgacagct	tatcatcgca	gatccgggca	acgttggtgc	cattgctgca	11520
ggcgcagaac	tggtaggtat	ggaagatcta	tacattgaat	caatattggc	aattagccat	11580
attagtcatt	ggttatatag	cataaatcaa	tattggctat	tggccattgc	atacgttgta	11640
tctatatcat	aatatgtaca	tttatattgg	ctcatgtcca	atatgaccgc	cat	11693

<210> 94
 <211> 4825
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Expression vector pMCP1

<400> 94

```
gacggatcgg gagatctccc gatcccctat ggtgcactct cagtacaatc tgctctgatg      60
ccgcatagtt aagccagtat ctgctccctg cttgtgtggt ggaggtcgct gagtagtgcg      120
cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgcatg aagaatctgc      180
ttagggttag gcgtttttgcg ctgcttcgcg atgtacgggc cagatatacg cgttgacatt      240
gattattgac tagttattaa tagtaatcaa ttacggggtc attagttcat agcccatata      300
tggagttccg cgttacataa cttacggtaa atggcccgcc tggctgaccg cccaacgacc      360
cccgcccatt gacgtcaata atgacgtatg ttcccatagt aacgccaata gggactttcc      420
attgacgtca atgggtggag tatttacggt aaactgcca cttggcagta catcaagtgt      480
atcatatgcc aagtacgccc cctattgacg tcaatgacgg taaatggccc gcctggcatt      540
atgccagta catgacctta tgggactttc ctacttgga gtacatctac gtattagtca      600
tcgctattac catggtgatg cggttttggc agtacatcaa tgggcgtgga tagcggtttg      660
actcacgggg atttccaagt ctccaccca ttgacgtcaa tgggagtttg ttttggcacc      720
aaaatcaacg ggactttcca aaatgtcgta acaactcgc cccattgacg caaatgggcg      780
gtaggcgtgt acggtgggag gtctatataa gcagagctct ctggctaact aagctttcgg      840
cgcgccgagg taccatggga tccgaagacg caaaaaacat aaagaaaggc ccggcgccat      900
tctatcctct agaggatgga accgctggag agcaactgca taaggctatg aagagatacg      960
ccctggttcc tggaacaatt gcttttacag atgcacatat cgaggagaac atcacgtacg     1020
cggaatactt cgaaatgtcc gttcggttg cagaagctat gaaacgatat gggctgaata     1080
caaatcacag aatcgtcgta tgcagtgaat actctcttca attctttatg ccggtgttgg     1140

gcgcgttatt tatcggagtt gcagttgcgc ccgcgaacga catttataat gaacgtgaat     1200
tgctcaacag tatgaacatt tcgcagccta ccgtagtggt tgtttccaaa aaggggttgc     1260
aaaaaatatt gaacgtgcaa aaaaaattac caataatcca gaaaattatt atcatggatt     1320
ctaaaacgga ttaccaggga tttcagtcga tgtacacggt cgtcacatct catctacctc     1380
ccggttttaa tgaatacgat tttgtaccag agtcctttga tcgtgacaaa acaattgcac     1440
tgataatgaa ttcctctgga tctactgggt tacctaaggg tgtggccctt ccgcatagaa     1500
ctgcctgcgt cagattctcg catgccagag atcctatatt tggcaatcaa atcattccgg     1560
atactgcgat tttaagtgtt gttccattcc atcacgggtt tggaatgttt actacactcg     1620
gatatttgat atgtggattt cgagtcgtct taatgtatag atttgaagaa gagctgtttt     1680
```

tacgatccct	tcaggattac	aaaattcaaa	gtgcgttgct	agtaccaacc	ctattttcat	1740
tcttcgccaa	aagcactctg	attgacaaat	acgattttatc	taattttacac	gaaatttgctt	1800
ctggggg'gc	acctcttttcg	aaagaagtcg	gggaagcggg	tgcaaaacgc	ttccatcttc	1860
cagggatacg	acaaggatat	gggctcactg	agactacatc	agctattctg	attacacccg	1920
aggggggatga	taaaccgggc	gcggtcggta	aagttgttcc	atTTTTtgaa	gcgaagggtg	1980
tggatctgga	taccgggaaa	acgctgggcg	ttaatcagag	aggcgaatta	tgtgtcagag	2040
gacctatgat	tatgtccggt	tatgtaaaca	atccggaagc	gaccaacgcc	ttgattgaca	2100
aggatggatg	gctacattct	ggagacatag	cttactggga	cgaagacgaa	cacttcttca	2160
tagttgaccg	cttgaagtct	ttaattaaat	acaaaggata	tcagggtggcc	cccgtgaat	2220
tggaatcgat	attgttacia	caccccaaca	tcttcgacgc	gggcgtggca	ggtcttccc	2280
acgatgacgc	cggtgaactt	cccgcgcgcg	ttgttgTTTT	ggagcacgga	aagacgatga	2340
cggaaaaaga	gatcgtggat	tacgtcgcca	gtcaagtaac	aaccgcgaaa	aagttgcgcg	2400
gaggagtgtg	gtttgtggac	gaagtaccga	aaggctttac	cggaaaactc	gacgcaagaa	2460
aaatcagaga	gatcctcata	aaggccaaga	agggcggaaa	gtccaaattg	cgcggccgct	2520
aactcgagaa	taaaatgagg	aaattgcac	gcattgtctg	agtaggtgtc	attctattct	2580
gggggggtggg	gtggggcgagg	acagcaaggg	ggaggattgg	gaagacaata	gcaggcatgc	2640
tggggatgcg	gtgggctcta	tggcttctga	ggcggaaaaga	accagctggg	gctctagggg	2700
gtatccccac	gcgccctgta	gcggcgcatt	aagcgcggcg	ggtgtggtgg	ttacgcgcag	2760
cgtgaccgct	acacttgcca	gcgccctagc	gcccgcctct	ttcgctttct	tccttctctt	2820
tctcgccacg	ttcgccggct	ttccccgtca	agctctaaat	cgggggtccc	tttagggttc	2880
cgatttagtg	ctttacggca	cctcgacccc	aaaaaacttg	attaggggtga	tggttcacgt	2940
acctagaagt	tcctattccg	aagttcctat	tctctagaaa	gtataggaac	ttccttggcc	3000
aaaaagcctg	aactcaccgc	gacgtctgtc	gagaagtttc	tgatcgaaaa	gttcgacagc	3060
gtctccgacc	tgatgcagct	ctcggagggc	gaagaatctc	gtgctttcag	cttcgatgta	3120
ggagggcggtg	gatatgtcct	gcgggtaaat	agctgcgcgcg	atggtttcta	caaagatcgt	3180
tatgtttatc	ggcactttgc	atcggccgcg	ctcccgattc	cggaaagtgt	tgacattggg	3240
gaattcagcg	agagcctgac	ctattgcac	tcccgcgcgtg	cacagggtgt	cacgttgcaa	3300
gacctgcctg	aaaccgaact	gcccgcgtgt	ctgcagcccg	tcgcggaggc	catggatgcg	3360
atcgctgcgg	ccgatcttag	ccagacgagc	gggttcggcc	cattcggacc	gcaaggaatc	3420
ggtcaataca	ctacatggcg	tgatttcata	tgcgcgattg	ctgatcccca	tgtgtatcac	3480
tggcaaactg	tgatggacga	caccgtcagt	gcgtccgctg	cgcaggctct	cgatgagctg	3540

atgctttggg ccgaggactg ccccgaaagtc cggcacctcg tgcagcaaac aaaccaccgc	3600
tggtagcggg ttttttgttt gcaagcagca gattacgcgc agaaaaaaag gatctcaaga	3660
agatcctttg atcttttcta cggggtctga cgctcagtgg aacgaaaact cacgttaagg	3720
gattttggtc atgagattat caaaaaggat cttcacctag atccttttaa attaaaaatg	3780
aagttttaaa tcaatctaaa gtatatatga gtaaacttgg tctgacagtt accaatgctt	3840
aatcagtgag gcacctatct cagcgatctg tctatttcgt tcatccatag ttgcctgact	3900
ccccgtcgtg tagataacta cgatacggga gggcttacca tctggcccca gtgctgcaat	3960
gataccgcga gaccacgct caccggctcc agatttatca gcaataaacc agccagccgg	4020
aagggccgag cgcagaagtg gtcttgcaac tttatccgcc tccatccagt ctattaattg	4080
ttgccgggaa gctagagtaa gtagttcgcc agttaatagt ttgcgcaacg ttgttgccat	4140
tgctacaggc atcgtggtgt cacgctcgtc gtttggtatg gcttcattca gctccggttc	4200
ccaacgatca aggcgagtta catgatcccc catgttggtgc aaaaaagcgg ttagctcctt	4260
cggctcctccg atcgttgtca gaagtaagtt ggccgcagtg ttatcactca tggttatggc	4320
agcactgcat aattctctta ctgtcatgcc atccgtaaga tgcttttctg tgactggtga	4380
gtactcaacc aagtcattct gagaatagtg tatgcggcga ccgagttgct cttgcccggc	4440
gtcaatacgg gataataccg cgccacatag cagaacttta aaagtgtca tcattggaaa	4500
acgttcttcg gggcgaaaac tctcaaggat cttaccgctg ttgagatcca gttcgatgta	4560
accactcgt gcacccaact gatcttcagc atcttttact ttcaccagcg tttctgggtg	4620
agcaaaaaca ggaaggcaaa atgccgcaaa aaagggaata agggcgacac ggaaatgttg	4680
aatactcata ctcttccttt ttcaatatta ttgaagcatt tatcagggtt attgtctcat	4740
gagcggatac atatttgaat gtatttagaa aaataaacia ataggggttc cgcgcacatt	4800
tccccgaaaa gtgccacctg acgtc	4825